

**IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF MISSISSIPPI
NORTHERN DIVISION**

LATOYA BROWN; et al

PLAINTIFFS

v.

Civ. No. 3:17cv347-WHB-LRA

MADISON COUNTY, MISSISSIPPI; et al

DEFENDANTS

**DEFENDANTS' MOTION IN LIMINE
TO EXCLUDE THE DECLARATION AND TESTIMONY OF RAHUL GUHA**

Pursuant to Federal Rules of Evidence 104, 401, 402, 403, and 1006, Defendants Madison County and Sherriff Randall C. Tucker, in his official capacity, file this Motion in Limine to Exclude the Declaration and Testimony of Rahul Guha (“Dr. Guha”). Dr. Guha’s summary statistics and calculations are misleading and objectively inaccurate. His declaration and testimony would do nothing to assist this Court in determining whether the Madison County Sheriff’s Department (“MCSD”) intentionally discriminates against Black citizens or otherwise treats Black citizens differently than similarly situated White citizens.

Courts have roundly rejected Dr. Guha’s methods, including especially his use of census benchmarking and raw statistics to infer disparate treatment. Likewise, social scientists who actually research law enforcement and racial profiling issues have repeatedly debunked his methods, as explained in the report of Defendants’ rebuttal expert Dr. Dwight Steward. (*See* Ex. 3, Steward Report, May 8, 2018). His statistics do not account for the myriad of relevant factors that go into making the calculations and summary statistics he purports to have done. (*Id.* and Ex. 4, Report by Mark Dunston, May 8, 2018). Though his declaration looks remarkably like an expert report, Plaintiffs elected to offer Dr. Guha’s statistics under Fed. R. Evid. 1006, rather than using

Dr. Guha as a sponsoring expert. Whatever the reason for this unconventional proffer, courts have ruled that the presentation of tabulations or raw statistics such as these, with *or* without testimony from a sponsoring expert, is unhelpful and does not address the relevant questions.

In support of this Motion, Defendants submit the following exhibits:

1. Summary Declaration of Rahul Guha Submitted Pursuant to Federal Rule of Evidence 1006, March 13, 2018;
2. Deposition of Rahul Guha, April 18, 2018;
3. Rebuttal Report of Dr. Dwight Steward, May 8, 2018;
4. Report of Expert Mark Dunston, May 8, 2018;
5. Rand Corp., Technical Report: Analysis of Racial Disparities in the New York Police Department's Stop, Question and Frisk Practices (2007); and
6. Letter from Kavitha Sivashanker to T. Russell Nobile, May 2, 2018.

Pursuant to Federal Rules of Evidence 104, 401, 402, 403, and 1006, and for all the reasons set forth in the Memorandum in Support of this Motion filed concurrently, Defendants move the Court to exclude the declaration and testimony of Rahul Guha and for all other relief the Court deems appropriate.

Respectfully submitted this 8th day of May, 2018.

**MADISON COUNTY, MISSISSIPPI and
SHERIFF RANDALL C. TUCKER, IN
HIS OFFICIAL CAPACITY**

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CERTIFICATE OF SERVICE

I, T. Russell Nobile, hereby certify that I electronically filed the foregoing with the Clerk of Court using the CM/ECF system which will automatically send email notification of such filing to the following:

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So, certified this the 8th day of May, 2018.

/s/ T. Russell Nobile

**UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF MISSISSIPPI
JACKSON DIVISION**

LATOYA BROWN; LAWRENCE
BLACKMON; HERBERT ANTHONY
GREEN; KHADAFY MANNING;
QUINNETTA MANNING; MARVIN
MCFIELD; NICHOLAS SINGLETON;
STEVEN SMITH; BESSIE THOMAS; and
BETTY JEAN WILLIAMS TUCKER,
individually and on behalf of a class of all
others similarly situated,

Plaintiffs,

v.

MADISON COUNTY, MISSISSIPPI;
SHERIFF RANDALL S. TUCKER, in his
official capacity; and MADISON COUNTY
SHERIFF'S DEPUTIES JOHN DOES #1
through #6, in their individual capacities,

Defendants.

Civil Action No.

3:17-cv-00347-WHB-LRA

SUMMARY DECLARATION OF RAHUL GUHA, PH.D.

SUBMITTED PURSUANT TO FEDERAL RULE OF EVIDENCE 1006

March 13, 2018

EXHIBIT 1

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I. Qualifications

1. I am a Senior Vice President at Cornerstone Research, a financial and economic consulting firm. I hold Ph.D. and M.S. degrees from Cornell University, an M.B.A. from the Indian Institute of Management, and a B.E. degree in Electronics and Telecommunications Engineering from Jadavpur University. I have over 20 years of experience advising clients in litigation matters.
2. I have been assisted in this matter by staff of Cornerstone Research, who worked under my direction. Cornerstone Research and I are providing our services in this matter pro bono.

II. Assignment

3. I have been asked by Simpson Thacher & Bartlett LLP, the American Civil Liberties Union of Mississippi Foundation, and the American Civil Liberties Union Foundation, Counsel for Plaintiffs in this action,¹ to perform the following calculations and to provide the following summaries based on data and documents produced by the Madison County Sheriff's Department ("MCSD"), and the Madison County Justice Court:
 - a. Data summary 1: Tabulate and summarize the data in ACLU12TO17.CSV ("Arrest Data") by offense and race. I understand that these data represent all individuals arrested by the MCSD and booked into the Madison County Detention Center from January 1, 2012 through September 20, 2017.²
 - b. Data summary 2: Tabulate and summarize the data in "ACLU FOIA Request 02052018 V1.xlsx" ("Citations Data") by violation and race.

¹ Class Action Complaint for Declaratory and Injunctive Relief and Individual Damages, *Latoya Brown; Lawrence Blackmon; Herbert Anthony Green; Khadafy Manning; Quinnetta Manning; Marvin McField; Nicholas Singleton; Steven Smith; Bessie Thomas; and Betty Jean Williams Tucker, individually and on behalf of a class of all others similarly situated, v. Madison County, Mississippi; Sheriff Randall S. Tucker, in his official capacity; and Madison County Sheriff's Deputies John Does #1 through #6, in their individual capacities*, CIVIL ACTION NO. 3:17-cv-347 WHB-LRA, filed May 8, 2017 ("Complaint").

² I have been informed by Counsel that in an email dated November 29, 2017 from Charles Cowan to Isaac Rethy, Mr. Cowan confirmed that the Arrest Data on which this data summary is based "is a copy of the Madison County Detention Center jail docket for 01/10/2012 through 09/20/2017 and that it reflects only arrests made by the Madison County Sheriff's Department and not those made by other arresting agencies." See Charles Cowan, email message to Isaac Rethy, November 29, 2017.

I understand that these data represent all citations issued to individuals in Madison County for the period from January 1, 2012 to December 31, 2017.³ These data include citations issued by the MCSD, as well as citations issued by other agencies operating within Madison County.⁴ The summary data I present are limited to citations issued by the MCSD.⁵

- c. Data summary 3: Summarize selected categories of data in the subset of incident reports produced by the MCSD. I understand that incident reports are filled out and filed by the MCSD officers after certain types of incidents take place, such as those involving arrests.⁶

4. A list of materials I used in performing my calculations and creating my data summaries is included as Appendix A.
5. The data and document sets on which these summaries and calculations are based are voluminous. Without the benefit of summaries and calculations, it may be inconvenient for the Court to examine the contents of these data and document sets.
6. Because of the volume of the documents and data I was asked to summarize, I required the assistance of staff of Cornerstone Research, who worked under my direction.

³ I have been informed by Counsel that the Citations Data was produced by the Madison County Justice Court in response to a records request pursuant to the Mississippi Public Records Act of 1983, Miss. Code Ann. § 25-61-1, *et seq.* dated November 17, 2017 seeking “[a]ll citations issued to individuals in Madison County for the period January 1, 2012 to the present.” In response to this request, the Madison County Justice Court produced a spreadsheet of citations comprising the time period from January 1, 2012 to December 31, 2017, “ACLU FOIA Request 02052018 V1.xlsx.”

⁴ I have been informed by Counsel that the Citations Data includes citations issued by the following law enforcement agencies, as identified by the corresponding acronyms in parentheses: Madison County Sheriff’s Office (MSO); Mississippi Highway Patrol (MHP); Madison County Constable (CON); Pearl River Reservoir Patrol (PRV); Public Service Commission (PSC); and Department of Wildlife Fisheries and Park (WCD).

⁵ I identified citations issued by the MCSD by selecting for citations issued by “MSO,” which I understand indicates citations issued by the MCSD.

⁶ I have been informed by Counsel that Defendants’ response to Interrogatory Number 15 describes the MCSD’s process for creating incident reports, as well as the circumstances under which an MCSD officer must prepare an incident report with a narrative. Defendants’ response to Interrogatory Number 15 states “an incident report with a narrative is not prepared as a result of every encounter experienced by a MCSD officer, but if an arrest is made, an incident report is prepared.” *See* Response by Defendants, Madison County, Madison County, Mississippi and Sheriff Randall Tucker, in His official capacity to Plaintiffs’ First Set of Interrogatories, *Latoya Brown; Lawrence Blackmon; Herbert Anthony Green; Khadafy Manning; Quinnetta Manning; Marvin McField; Nicholas Singleton; Steven Smith; Bessie Thomas; and Betty Jean Williams Tucker, individually and on Behalf of a class of all other similarly situated, v. Madison County, Mississippi; Sheriff Randall S. Tucker, in his official capacity; and Madison County Sheriff’s Deputies John Does #1 through #6, in their individual capacities*, CIVIL ACTION NO. 3:17-cv-347-WHB-LRA, dated October 20, 2017 (“Interrogatory Responses”) at p. 13.

7. My calculations and data summaries are based on data that was available to me as of the date of this declaration (“Declaration”). This Declaration is limited to presenting the results of these calculations and summaries. I reserve the right to supplement this Declaration if additional data were to be made available to me or if I am asked to perform additional calculations or provide additional data summaries.

III. Methodology

A. Data summary 1: Arrests made by the MCSD

8. It is my understanding that the Arrest Data include all individuals arrested by MCSD and booked into the Madison County Detention Center from January 1, 2012 through September 20, 2017. The data include information regarding the date of each arrest, the name, gender and race of the individual arrested, the offense for which the individual was arrested, and the corresponding offense code. I understand that it is possible for an individual to be arrested and booked for more than one offense at the same time.

9. My calculation is based on the Arrest Data after duplicates have been removed based on the combination of name, race, sex, date, and offense code. I assume that such duplicates indicate that an individual was charged with multiple counts of the same offense, rather than such duplicates indicating two different arrest and booking incidents in a single day. Removing these duplicates removes 2,559 observations, 10% of the total observations in the Arrest Data.

10. I first tabulate the percentage of all arrests that are associated with Black individuals in the Arrest Data. Exhibit 1 shows that 77% of all arrests are associated with Black individuals, compared with 20% of all arrests associated with white individuals, and 3% associated with individuals of other races. Note that this calculation is conducted on a per-offense, rather than a per-individual basis (except for the removal of duplicates set forth above). Thus, if an individual is arrested and charged with three unique offenses on one day, I count those arrests as three separate arrests.

11. Next, I calculate the percentage of Black arrestees among all arrestees for each offense code. Exhibit 2 shows the percentage of arrestees who are Black for each

offense code with more than 100 total arrests. For example, this exhibit shows that Black individuals accounted for:

- 94% of arrests for no child restraint;⁷
- 88% of arrests for no seatbelt;⁸
- 87% of arrests for driving with a suspended or revoked license;⁹
- 85% of arrests for speeding on local highways;¹⁰
- 83% of arrests for no proof of liability insurance;¹¹
- 83% of arrests for driving without a license;¹²
- 83% of arrests for driving without paying a license tax;¹³
- 80% of arrests for disobedience of a traffic control device;¹⁴
- 81% of arrests for driving without an up-to-date certificate of inspection;¹⁵
- 80% of arrests for improper vehicle equipment;¹⁶
- 77% of arrests for an improper turn (turning without a turn signal);¹⁷ and
- 68% of arrests for careless driving.¹⁸

⁷ This calculation is based on offense code 63-7-301. I understand from Counsel that this offense code corresponds to arrests under Miss. Code § 63-7-301, entitled *Requirement; failure as negligence*.

⁸ This calculation is based on offense code 63-2-1. I understand from Counsel that this offense code corresponds to arrests under Miss. Code § 63-2-1, entitled *Seat belts required; definition; exemptions*.

⁹ This calculation is based on offense code 63-1-57. I understand from Counsel that this offense code corresponds to arrests under Miss. Code § 63-1-57, entitled *Driving after suspension or revocation*.

¹⁰ This calculation is based on offense code 63-3-511. I understand from Counsel that this offense code corresponds to arrests under Miss. Code § 63-3-511, entitled *Reduced speed limits, other officials*.

¹¹ This calculation is based on offense code 63-15-4. I understand from Counsel that this offense code corresponds to arrests under Miss. Code § 63-15-4, entitled *Proof of insurance; insurance card; violations and penalties*.

¹² This calculation is based on offense code 63-1-5. I understand from Counsel that this offense code corresponds to arrests under Miss. Code § 63-1-5, entitled *Operating vehicle without license; offense; penalty*.

¹³ This calculation is based on offense code 27-19-131. I understand from Counsel that this offense code corresponds to arrests under Miss. Code § 27-19-131, entitled *Consequences of violations*.

¹⁴ This calculation is based on offense code 63-3-313. I understand from Counsel that this offense code corresponds to arrests under Miss. Code § 63-3-313, entitled *Only police officer directive overrides signal*.

¹⁵ This calculation is based on offense code 63-13-7. I understand from Counsel that this offense code corresponds to arrests under Miss. Code § 63-13-7 (repealed in 2015), entitled *Requirement of periodic inspection and approval of motor vehicles, trailers, and school buses; display of certificate of inspection and approval; exemption of certain motor vehicles*.

¹⁶ This calculation is based on offense code 63-7-7. I understand from Counsel that this offense code corresponds to arrests under Miss. Code § 63-7-7, entitled *Breach as misdemeanor*. I also understand from Counsel that this statutory section is part of Chapter 7, entitled *Equipment and Identification General Provisions*, of Title 63, entitled *Motor Vehicles and Traffic Regulations*.

¹⁷ This calculation is based on offense code 63-3-707. I understand from Counsel that this offense code corresponds to arrests under Miss. Code § 63-3-707, entitled *Signaling turns and stops*.

¹⁸ This calculation is based on offense code 63-3-1213. I understand from counsel that this offense code corresponds to arrests under Miss. Code § 63-3-1213, entitled *Careless or imprudent driving*.

12. Exhibit 2 also indicates the number of arrests of Black individuals for each offense code at the top of the bar. For example, 193 Black individuals were arrested for no child restraint, while 548 Black individuals were arrested for no seatbelt.

13. I have also marked the population percentage of Black individuals in Madison County as a dotted line on Exhibit 2. According to data from the U.S. Census Bureau, 38.4% of the population of Madison County was Black as of July 1, 2016.¹⁹ All offense codes in the Arrest Data that have more than 100 arrests have a higher percentage of Black arrestees than the percentage of Black residents in Madison County.

14. A full set of my tabulations for each offense code can be found in Appendix B. This Appendix shows that arrests corresponding to 251 out of 282 offense codes in the Arrest Data have a higher percentage of Black arrestees than the percentage of Black residents in Madison County.²⁰

15. I also calculate the racial profile of the arrested population as a ratio of the residential population of Madison County. To do so, I first calculate the number of Black individuals arrested per offense code in the Arrest Data. I then divide that number by the population of Black residents in Madison County as of July 1, 2016. This figure is the number of Black arrests per capita in Madison County for each offense code. I calculate the same figure for non-Black residents of Madison County. The ratio between these two figures represents how much more frequently Black individuals are arrested for a particular offense code compared with non-Black individuals, accounting for the difference in the population between Black and non-Black individuals. If Black and non-Black individuals were arrested under an offense code at equal rates, then this ratio would be 1, since the per capita number of Black arrestees would be the same as the per capita number of non-Black arrestees.

16. The results of this calculation are presented in Appendix B. The ratio between the number of per capita Black arrestees and non-Black arrestees for each offense is higher than 1 for 251 out of 282 offense codes. For example, the value of this ratio is

¹⁹ The variable "Black or African American alone, percent, July 1, 2016" is used as the Black percentage of the population in Madison County. See "QuickFacts: Madison County, Mississippi," *United States Census Bureau*, available at <https://www.census.gov/quickfacts/fact/table/madisoncountymississippi,MS/PST045217>, accessed 12/26/2017.

²⁰ There are six observations in "ACLU12TO17.CSV" that have no offense code and no offense description. These are displayed in the table as "Missing Code" and "Missing Offense."

11.72 for the no seatbelt offense code (Miss. Code § 63-2-1), indicating that the per capita number of Black arrestees under this offense code is over 11 times higher than the per capita number of non-Black arrestees under this offense code.

B. Data summary 2: Citations issued by the MCSD

17. It is my understanding that the Citations Data represent all citations issued to individuals in Madison County for the period from January 1, 2012 through December 31, 2017. These data include information such as the date of the ticket, the violation,²¹ and the name, sex, and race of the individual cited. I understand that it is possible for an individual to receive a citation for multiple violations on the same day. I limit my calculations to citations issued by the MCSD only.²²

18. My calculations are based on the Citations Data after duplicates have been removed based on date, name, sex, race and violation. I assume that such duplicates indicate a record-keeping discrepancy, or an instance in which an individual was issued multiple citations for the same violation in one incident, rather than such duplicates indicating two different encounters in which citations for the same violation were issued to the same person in a single day. Removing duplicates as described removes 122 observations, which is 0.5% of the total Citations Data for the MCSD.

19. I first tabulate the percentage of all citations that are associated with Black individuals in the Citations Data.²³ Exhibit 3 shows that 72% of all citations are issued to Black individuals, compared with 23% of all citations issued to white individuals, and 5% issued to individuals of other races.

20. Next, I calculate the percentage of citations issued to Black individuals relative to the total number of citations recorded in the dataset, within each violation

²¹ The description of the violations in the Citations Data includes values that appear to refer to the same violation, but have minor differences. For example, there are instances in which the same description appears as both proper case and upper case. There are also many instances in which descriptions are similar, such as "CHILD RESTRAINT VIOLATION 3YRS" and "CHILD RESTRAINT VIOLATION 4YRS." Some violations have slightly different spellings such as "DISREGARD FOR TRAFFIC DEVICE" and "DISREGARD FOR TRFC DEV." Finally, some violations have strong similarities or word overlap, such as "EXPIRED TAG," "EXPIRED TAG/NO TAG," and "IMPROPER / EXP TAG." For the purpose of this data summary, I have grouped violations into categories as a data cleaning measure.

²² It is my understanding that citations for which the ticketing agency is "MSO" are citations issued by the MCSD.

²³ Note that this summary is conducted at the person-date-offense level, rather than at the individual level. If an individual is issued three citations for different violations by the MCSD in one day, that is counted as three citations in this summary.

category. Exhibit 4 shows the percentage of citations issued to Black individuals for each violation category.²⁴ For example, this exhibit shows that Black individuals were issued:

- 94% of citations for a child restraint violation;
- 84% of citations for driving with a suspended license;
- 77% of citations for no proof of liability insurance;
- 76% of citations for following another vehicle too closely;
- 74% of citations issued for a seatbelt violation;
- 73% of citations for failure to yield;
- 71% of citations for improper equipment;
- 71% of citations for an improper turn;
- 63% of citations for an improper tag or no tag; and
- 62% of citations for reckless driving;

21. Exhibit 4 also indicates the number of citations issued to Black individuals for each violation category at the top of the bar. For example, 599 Black individuals were issued a citation for a child restraint violation, while 1412 Black individuals were issued citations for a seatbelt violation.

22. I have also marked the population percentage of Black individuals in Madison County as a dotted line on this Exhibit. According to data from the U.S. Census Bureau, 38.4% of the population of Madison County was Black as of July 1, 2016.²⁵ All violation categories in the Citations Data presented in Exhibit 4 have a higher percentage of Black individuals cited than the percentage of Black residents in Madison County.

23. A full set of my tabulations for all violation categories can be found in Appendix C. This Appendix shows that, for 23 out of 24 violation categories in the Citations Data, the percentage of Black individuals cited for the violation category is higher than the percentage of Black residents in Madison County.²⁶

²⁴ I exclude the category “Speeding,” which contained only one observation, from this exhibit.

²⁵ The variable “Black or African American alone, percent, July 1, 2016” is used as the Black percentage of the population in Madison County. “QuickFacts: Madison County, Mississippi,” *United States Census Bureau*, available at <https://www.census.gov/quickfacts/fact/table/madisoncountymississippi,MS/PST045217>, accessed on 12/26/2017.

²⁶ There are 1,066 observations in “ACLU FOIA Request 02052018 V1.xlsx” that were not grouped into a violation category. These are displayed in the Appendix as “No Category Assigned.”

24. I also calculate the racial profile of the population issued citations as a ratio of the residential population of Madison County. To do so, I first calculate the number of citations issued to Black individuals per violation category in the Citations Data. I then divide that number by the population of Black residents in Madison County as of July 1, 2016. This figure is the per capita number of citations issued to Black individuals for each violation category. I calculate the same figure for non-Black residents of Madison County. The ratio between these two figures represents how much more frequently citations are issued to Black individuals for each violation category compared to non-Black individuals, accounting for the difference in the population between Black and non-Black individuals. If Black and non-Black individuals were issued citations for a particular violation at equal rates, then this ratio would be 1, since the per capita number of citations issued to Black individuals would be the same as the per capita number of citations issued to non-Black individuals.

25. The results of these calculations are presented in Appendix C for each violation category. The ratio between the number of citations issued per capita to Black individuals and non-Black individuals for each violation category is higher than 1 for all violation categories except speeding. For example, the value of this ratio is 4.62 for the citations for a seatbelt violation, indicating that the per capita number of citations issued to Black individuals for this violation is more than four times higher than the per capita number of citations issued to non-Black individuals for this violation.

26. I was also asked to calculate the racial distribution of citations issued for a seatbelt violation only. In other words, I limit the Citations Data to individuals (as defined by unique name, race, and gender) who only have a citation issued for a seatbelt violation listed on a given day in the Citations Data. Exhibit 5 shows that 67% of these individuals are Black, while 32% are white. 1% of these individuals are of some other race.

C. Data summary 3: Incident reports

27. I understand that a number of incident reports from the time period 2012–2017 have also been produced in this matter. I understand that incident reports are filled out and filed by MCSD officers after certain types of incidents take place, such as those involving arrests.

28. It is my understanding that the incident reports produced by Defendants represent a subset of all incident reports filed during this time period.²⁷ At the direction of Counsel, I have limited my summaries of these incident reports to the following categories of law enforcement activity: arrests related to stops at roadblocks, apartment walkthroughs, and arrests related to traffic stops.

29. The following methodology was followed in order to convert the PDF files produced by Defendants into data that could be summarized. First, the PDF files of the incident reports were processed by text recognition software. Next, keyword searches of the processed files were used in order to identify incident reports related to each topic of interest, the details of which are described below. From the files identified by each keyword search, I further limited to the incident reports that also mentioned an arrest. Finally, the status and race of individuals mentioned in the incident reports were parsed from the processed incident reports.

30. At my direction, a team at Cornerstone Research has implemented this methodology and checked the results to ensure that the data have been objectively collected.²⁸

1. Arrests from Stops at Roadblocks

31. Incident reports relating to arrests resulting from stops at roadblocks were identified by searching for the terms “road block,” “roadblock,” “check point,” “checkpoint,” or “safety check” within the set of PDF incident reports produced by Defendants (the “Roadblock Incident Reports”).

²⁷ I have been informed by Counsel that Defendants’ Memorandum of Authorities in Opposition to Plaintiffs’ Motion to Compel, *Latoya Brown; Lawrence Blackmon; Herbert Anthony Green; Khadafy Manning; Quinnetta Manning; Marvin McField; Nicholas Singleton; Steven Smith; Bessie Thomas; and Betty Jean Williams Tucker, individually and on behalf of a class of all others similarly situated, v. Madison County, Mississippi; Sheriff Randall S. Tucker, in his official capacity; and Madison County Sheriff’s Deputies John Does #1 through #6, in their individual capacities*, CIVIL ACTION NO. 3:17-cv-347 WHB LRA, dated November 3, 2017 (“Memorandum of Authorities”) broadly describes the selection process Defendants undertook to produce incident reports in this action. Defendants represented that they have produced “incident reports arguably relevant to plaintiffs’ claims in this case.” Memorandum of Authorities at p. 3.

²⁸ Due to the quality of the files produced by Defendants, there may be files that are not identified by the methodology described above, but would have been identified as relevant by a manual review. However, because I have defined an objective methodology for selecting the incident reports to include in this summary, I have no reason to believe that the incident reports represented here are a biased sample of the incident reports produced by Defendants in this matter.

32. Exhibit 6 tabulates the number of arrests identified from the Roadblock Incident Reports, grouped by race.²⁹ Exhibit 6 also shows the percentage of arrests by race out of the total number of arrests identified in the Roadblock Incident Reports. The total number of identified arrests is 1,265, with arrests of Black individuals representing 76% of total arrests.

2. Apartment Walkthroughs

33. Incident reports relating to apartment walkthroughs were identified by searching for the terms “walk through,” “walkthrough,” “walk thru,” “walk-thru,” “walk-through,” or “apartment_walk_thru” (the “Apartment Walkthrough Incident Reports”).

34. A total of 418 Apartment Walkthrough Incident Reports were identified as relating to apartment walkthroughs by the keyword search methodology described above. Exhibit 7 shows that of those, 41 were identified as reporting the arrest of an individual. This represents 10% of the Apartment Walkthrough Incident Reports. Of the arrested individuals identified from the Apartment Walkthrough Incident Reports, 90% are Black individuals.

3. Arrests from Traffic Stops

35. Incident reports relating to arrests made at traffic stops were identified by searching for the terms “stop,” “V.T.O.,” “D.U.I.” or “traffic offenses,” together with the term “arrest” (the “Traffic Stop Incident Reports”).

36. Exhibit 8 tabulates the number of arrests identified from the Traffic Stop Incident Reports, grouped by race. Exhibit 8 also shows the percentage of arrests per race out of the total arrests identified from the Traffic Stop Incident Reports. The total number of identified arrests is 3,227, with arrests of Black individuals representing 74% of total arrests.

37. I was also asked to summarize incident reports documenting arrests resulting from traffic stops initiated because of seatbelt violations only. Such incident reports were identified by searching for “seat belt,” “seatbelt,” “safety belt,” or “buckle”.

²⁹ An individual is considered an arrestee if the parsing methodology identifies the “Status” on the incident report for the individual as “ARREST”.

Incident reports identified were then manually reviewed to evaluate whether the narrative of the incident report noted that the traffic stop was initially made because of a seatbelt violation and for no other reason. Only incident reports for which the narrative of the incident report could be extracted by text parsing were manually reviewed.

38. Exhibit 9 tabulates the number of arrests resulting from traffic stops initiated for seatbelt violations only from the set of incident reports identified by the keyword search methodology described above. These identified arrests are presented grouped by race, with the number of arrests per race as a percentage of total arrests. The total number of identified arrests is 102, with arrests of Black individuals representing 90% of total arrests.

Executed this 13th day of March, 2018



Rahul Guha

Summary of Total Arrests

Madison County Sheriff's Department 2012–2017

Race	Number of Arrests	Percentage
Black	17,631	77%
White	4,669	20%
Other	717	3%
Total	23,017	100%

Source: ACLU12TO17.CSV

Note:

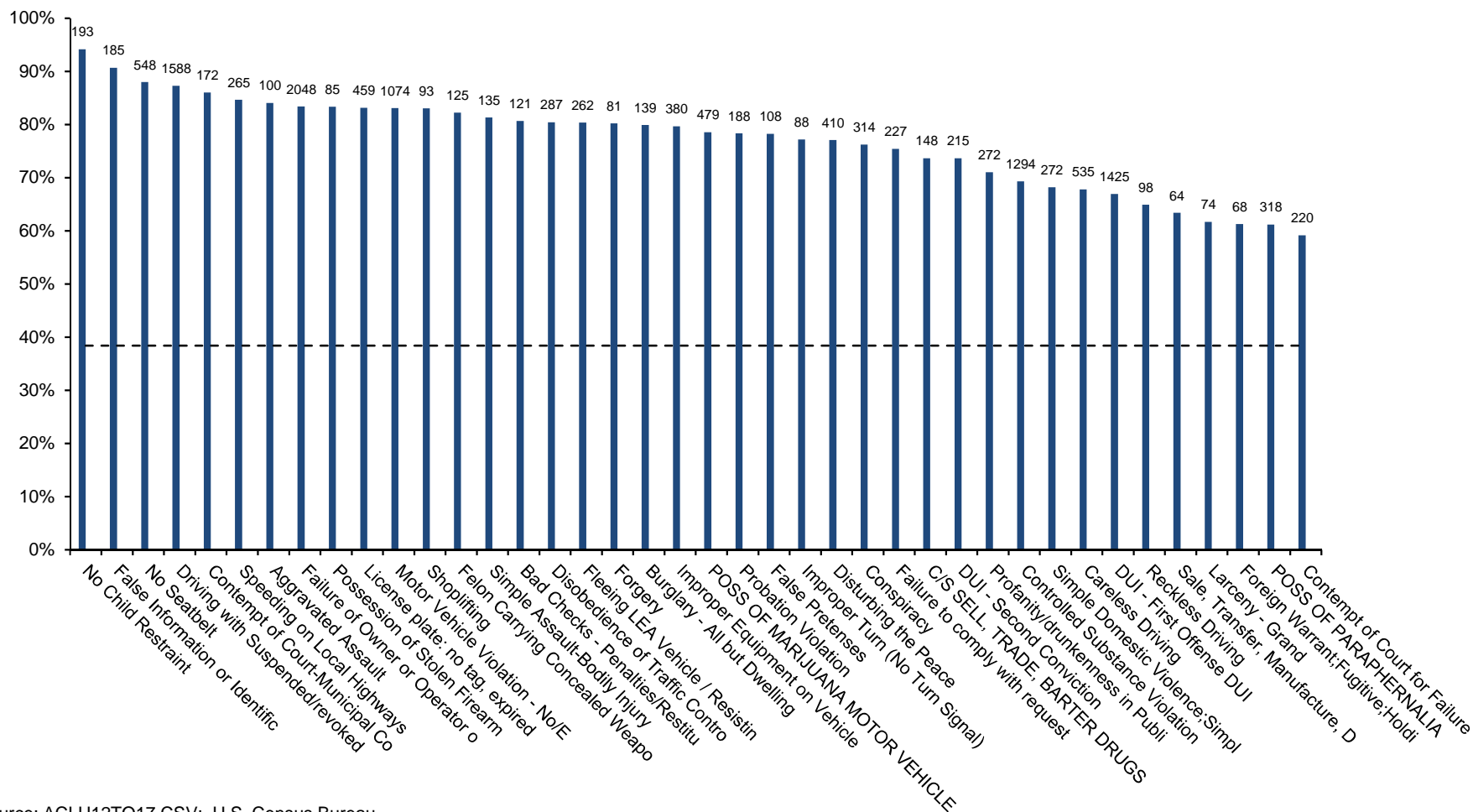
[1] The tabulation was conducted under the assumption that an individual can only be arrested once a day for the same offense code. For this reason, the data is de-duplicated by first name, last name, gender, race, date, and offense code.

[2] Individuals identified with race "B" are grouped as "Black," individuals identified with race "W" are grouped as "White," and individuals identified with any other race are grouped as "Other."

Black Percentage of Arrests by Offense Code

Madison County Sheriff's Department 2012–2017

Black Percentage



Source: ACLU12TO17.CSV; U.S. Census Bureau

Note:

[1] Dashed line indicates that 38.4% of Madison County, MS was black as of July 1, 2016.

[2] The number of arrests of Black individuals for an offense code is shown above the bar for the offense code.

[3] Includes offense codes with more than 100 observations.

[4] The descriptions of the offense codes correspond to the descriptions set forth in ACLU12TO17.CSV. In certain instances, the descriptions appear to have been cut off in ACLU12TO17.CSV.

Summary of Total Citations

Madison County Sheriff's Department 2012–2017

Race	Number of Citations	Percentage
Black	18,285	72%
White	5,829	23%
Other	1,339	5%
Total	25,453	100%

Source: ACLU FOIA Request 02052018 V1.xlsx

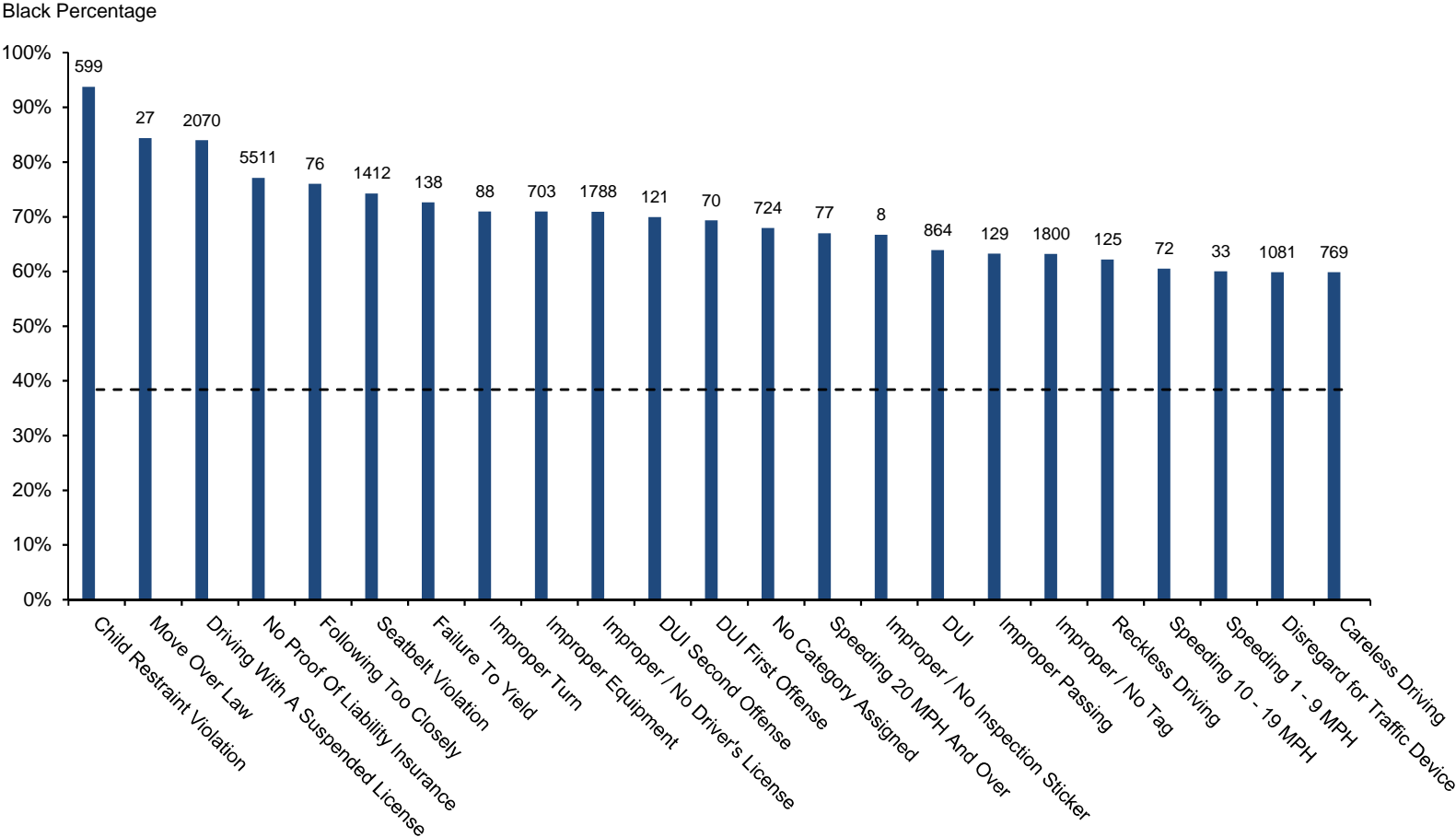
Note:

[1] The tabulation was conducted under the assumption that an individual can only be cited once a day for the same violation. For this reason, the data is de-duplicated by ticketing agency, name, gender, race, date, and violation. I assume that if two observations have the same name, gender, and race then they are the same person.

[2] Individuals identified with race "B" are grouped as "Black," individuals identified with race "W" are grouped as "White," and individuals identified with any other race are grouped as "Other."

[3] This tabulation reflects only citations issued by the MCSD. It is my understanding that citations for which the ticketing agency is "MSO" are citations issued by the MCSD.

Black Percentage of Citations by Violation Category
Madison County Sheriff's Department 2012–2017



Source: ACLU FOIA Request 02052018 V1.xlsx; U.S. Census Bureau

Note:
[1] Dashed line indicates that 38.4% of Madison County, MS was black as of July 1, 2016.
[2] The number of citations of Black individuals for a violation category is shown above the bar for the violation category. Categories with 10 or more citations are shown.
[3] This tabulation reflects only citations issued by the MCSD. It is my understanding that citations for which the ticketing agency is "MSO" are citations issued by the MCSD.
[4] Violations are grouped by violation categories. These categories are created as a data cleaning measure to combine citation violations that are similar.

Individuals Cited For A Seatbelt Violation Only Madison County Sheriff's Department 2012–2017

Race	Number of Citations	Percentage of Total
Black	666	67%
White	315	32%
Other	12	1%
Total	993	100%

Source: ACLU FOIA Request 02052018 V1.xlsx

Note:

[1] Citations where Race does not equal "B" or "W" are included in the "Other" race category. I assume that two citations were issued to the same person if the name, race, and gender are equal. This tabulation includes all people who were cited for only a Seatbelt Violation on a given day. If a person was cited for a Seatbelt Violation only on two different days, each of those citations is counted. "Seatbelt Violation" refers to a violation that is in the Seatbelt Violation category.

[2] This tabulation reflects only citations issued by the MCSD. It is my understanding that citations for which the ticketing agency is "MSO" are citations issued by the MCSD.

Arrests From Incident Reports Related to Stops at Roadblocks^[1] Madison County Sheriff's Department 2012–2017

Race	Number of Arrests	Percentage of Total
Black ^[2]	956	76%
White ^[3]	277	22%
Hispanic ^[4]	27	2%
Other ^[5]	5	0%
Total	1,265	100%

Source: Incident Reports Produced by Defendants, MC-RFP-Inc. Rep. 000001 – MC-RFP-Inc. Rep. 059053.

Note:

[1] A keyword search identified incident reports related to stops at roadblocks using the search term "road block OR roadblock OR check point OR checkpoint OR safety check." This search resulted in 1,702 incident reports. The incident reports were then parsed programmatically. The parsed results contain 2,396 observations corresponding to individuals or entities listed in the "Persons" section of the incident report. This tabulation is based on observations for which the person status is identified as "ARREST". Duplicates based on incident report filename, parsed name, and parsed race are removed. Observations for which the name is "NA" or for which race is not parsed as described below are removed.

[2] Any person whose parsed race contains "BLACK" is grouped as "Black."

[3] Any person whose parsed race contains "WHITE" is grouped as "White."

[4] Any person whose parsed race is "HISPANIC" or "HISPAN1C" is grouped as "Hispanic."

[5] Any person whose parsed race is "ASIAN ISLANDER," "A5IAN ISLANDER," "AMERICANINDIAN," or "OTHER" is grouped as "Other."

Arrests From Incident Reports Related to Apartment Walkthroughs^[1] Madison County Sheriff's Department 2012–2017

Race	Number of Arrests	Percentage of Total
Black ^[2]	37	90%
White ^[3]	4	10%
Hispanic ^[4]	-	-
Other ^[5]	-	-
Total	41	100%

Source: Incident Reports Produced by Defendants, MC-RFP-Inc. Rep. 000001 – MC-RFP-Inc. Rep. 059053.

Note:

[1] A keyword search identified incident reports related to apartment walkthroughs using the search term "walk through OR walkthrough OR walk thru OR walk-thru OR walk-through OR apartment_walk_thru." This search resulted in 418 incident reports. The incident reports were then parsed programmatically. The parsed results contain 460 observations corresponding to individuals or entities listed in the "Persons" section of the incident report. This tabulation is based on observations for which the person status is identified as "ARREST". Duplicates based on incident report filename, parsed name, and parsed race are removed. Observations for which the name is "NA" or for which race is not parsed as described below are removed.

[2] Any person whose parsed race contains "BLACK" is grouped as "Black."

[3] Any person whose parsed race contains "WHITE" is grouped as "White."

[4] Any person whose parsed race is "HISPANIC" or "HISPAN1C" is grouped as "Hispanic."

[5] Any person whose parsed race is "ASIAN ISLANDER," "A5IAN ISLANDER," "AMERICANINDIAN," or "OTHER" is grouped as "Other."

Arrests From Incident Reports Related to Traffic Stops^[1] Madison County Sheriff's Department 2012–2017

Race	Number of Arrests	Percentage of Total
Black ^[2]	2,393	74%
White ^[3]	707	22%
Hispanic ^[4]	108	3%
Other ^[5]	19	1%
Total	3,227	100%

Source: Incident Reports Produced by Defendants, MC-RFP-Inc. Rep. 000001 – MC-RFP-Inc. Rep. 059053.

Note:

[1] A keyword search identified incident reports related to traffic stops using the search term "(stop OR v.t.o. OR d.u.i OR traffic offenses) AND arrest." This search resulted in 4,404 incident reports. The incident reports were then parsed programmatically. The parsed results contain 6,930 observations corresponding to individuals or entities listed in the "Persons" section of the incident report. This tabulation is based on observations for which the person status is identified as "ARREST". Duplicates based on incident report filename, parsed name, and parsed race are removed. Observations for which the name is "NA" or for which the race is not parsed as described below are removed.

[2] Any person whose parsed race contains "BLACK" is grouped as "Black."

[3] Any person whose parsed race contains "WHITE" is grouped as "White."

[4] Any person whose parsed race is "HISPANIC" or "HISPAN1C" is grouped as "Hispanic."

[5] Any person whose parsed race is "ASIAN ISLANDER," "A5IAN ISLANDER," "AMERICANINDIAN," or "OTHER" is grouped as "Other."

Arrests From Incident Reports Related to Traffic Stops Initiated For A Seatbelt Violation Only^[1] Madison County Sheriff's Department 2012–2017

Race	Number of Arrests	Percentage of Total
Black ^[2]	92	90%
White ^[3]	6	6%
Hispanic ^[4]	4	4%
Other ^[5]	-	-
Total	102	100%

Source: Incident Reports Produced by Defendants, MC-RFP-Inc. Rep. 000001 – MC-RFP-Inc. Rep. 059053.

Note:

[1] A keyword search identified incident reports relating to traffic stops initiated for seatbelt violations only using the search term "seat belt OR seatbelt OR safety belt OR buckl." This search resulted in 574 incident reports. The incident reports were then parsed programmatically. The parsed results contain 856 observations corresponding to individuals or entities listed in the "Persons" section of the incident report. This tabulation is based on observations for which the person status is identified as "ARREST" and for which a manual review identified a traffic stop that was initially made because of a seatbelt violation and for no other reason. Duplicates based on filename, parsed name, and parsed race are removed. Observations for which name is "NA" or for which race is not parsed as described below are removed.

[2] Any person whose parsed race contains "BLACK" is grouped as "Black."

[3] Any person whose parsed race contains "WHITE" is grouped as "White."

[4] Any person whose parsed race is "HISPANIC" or "HISPAN1C" is grouped as "Hispanic."

[5] Any person whose parsed race is "ASIAN ISLANDER," "A5IAN ISLANDER," "AMERICANINDIAN," or "OTHER" is grouped as "Other."

Documents Cited or Summarized by Rahul K. Guha

Legal Pleadings

- Class Action Complaint for Declaratory and Injunctive Relief and Individual Damages, *Latoya Brown; Lawrence Blackmon; Herbert Anthony Green; Khadafy Manning; Quinnetta Manning; Marvin McField; Nicholas Singleton; Steven Smith; Bessie Thomas; and Betty Jean Williams Tucker, individually and on behalf of a class of all others similarly situated, v. Madison County, Mississippi; Sheriff Randall S. Tucker, in his official capacity; and Madison County Sheriff's Deputies John Does #1 through #6, in their individual capacities*, CIVIL ACTION NO. 3:17-cv-347 WHB LRA. May 8, 2017
- Defendants' Memorandum of Authorities in Opposition to Plaintiffs' Motion to Compel, *Latoya Brown; Lawrence Blackmon; Herbert Anthony Green; Khadafy Manning; Quinnetta Manning; Marvin McField; Nicholas Singleton; Steven Smith; Bessie Thomas; and Betty Jean Williams Tucker, individually and on behalf of a class of all others similarly situated, v. Madison County, Mississippi; Sheriff Randall S. Tucker, in his official capacity; and Madison County Sheriff's Deputies John Does #1 through #6, in their individual capacities*, CIVIL ACTION NO. 3:17-cv-347 WHB LRA. November 3, 2017
- Order Granting Motion to Compel, *Latoya Brown; Lawrence Blackmon; Herbert Anthony Green; Khadafy Manning; Quinnetta Manning; Marvin McField; Nicholas Singleton; Steven Smith; Bessie Thomas; and Betty Jean Williams Tucker, individually and on behalf of a class of all others similarly situated, v. Madison County, Mississippi; Sheriff Randall S. Tucker, in his official capacity; and Madison County Sheriff's Deputies John Does #1 through #6, in their individual capacities*, CIVIL ACTION NO. 3:17-cv-347 WHB LRA. December 27, 2017
- Response by Defendants, Madison County, Madison County, Mississippi and Sherriff Randall Tucker, in his official capacity to Plaintiffs' First Set of Interrogatories, *Latoya Brown; Lawrence Blackmon; Herbert Anthony Green; Khadafy Manning; Quinnetta Manning; Marvin McField; Nicholas Singleton; Steven Smith; Bessie Thomas; and Betty Jean Williams Tucker, individually and on behalf of a class of all others similarly situated, v. Madison County, Mississippi; Sheriff Randall S. Tucker, in his official capacity; and Madison County Sheriff's Deputies John Does #1 through #6, in their individual capacities*, CIVIL ACTION NO. 3:17-cv-347 WHB LRA. October 20, 2017

Data

- "ACLU12TO17.CSV." 2012–2017
- "ACLU FOIA Request 02052018 V1.xlsx." 2012–2017
- Incident Reports Produced by Defendants, MC-RFP-Inc. Rep. 000001 – MC-RFP-Inc. Rep. 059053 2012–2017
- "QuickFacts: Madison County, Mississippi," *United States Census Bureau*, available at <https://www.census.gov/quickfacts/fact/table/madisoncountymississippi,MS/PST045217>, accessed on 12/26/2017.

Miscellaneous

- Email from Charles Cowan Re: Latoya Brown, et al. v. Madison County, MS, et al., No. 3:17-cv-347 WHB LRA [EXT]. November 29, 2017

Summary of Arrests by Offense Code

Madison County Sheriff's Department 2012–2017

Offense Code	Offense	Number of Arrests			Black Percentage	Per Capita Ratio of Black to Non-Black ^[5]
		Total	Black	Non-Black		
63-15-4	Failure of Owner or Operator o	2,456	2,048	408	83%	8.05
63-11-30(2)(A)	DUI - First Offense DUI	2,129	1,425	704	67%	3.25
41-29-139	Controlled Substance Violation	1,867	1,294	573	69%	3.62
63-1-57	Driving with Suspended/revoked	1,820	1,588	232	87%	10.98
63-1-5	Motor Vehicle Violation - No/E	1,293	1,074	219	83%	7.87
63-3-1213	Careless Driving	789	535	254	68%	3.38
63-2-1	No Seatbelt	623	548	75	88%	11.72
41-29-139(c)(2)(B)	POSS OF MARIJUANA MOTOR VEHICLE	610	479	131	79%	5.87
27-19-131	License plate: no tag, expired	552	459	93	83%	7.92
97-35-15	Disturbing the Peace	532	410	122	77%	5.39
41-29-139(d)(1)	POSS OF PARAPHERNALIA	520	318	202	61%	2.53
63-7-7	Improper Equipment on Vehicle	477	380	97	80%	6.28
97-1-1	Conspiracy	412	314	98	76%	5.14
97-3-7(3)	Simple Domestic Violence;Simpl	399	272	127	68%	3.44
97-29-47	Profanity/drunkenness in Publi	383	272	111	71%	3.93
13-5-34	Contempt of Court for Failure	372	220	152	59%	2.32
63-3-313	Disobedience of Traffic Contro	357	287	70	80%	6.58
97-9-73	Fleeing LEA Vehicle / Resistin	326	262	64	80%	6.57
63-3-511	Speeding on Local Highways	313	265	48	85%	8.86
97-35-7	Failure to comply with request	301	227	74	75%	4.92
63-11-30(2)(B)	DUI - Second Conviction	292	215	77	74%	4.48
47-7-37	Probation Violation	240	188	52	78%	5.80
63-7-301	No Child Restraint	205	193	12	94%	25.80
97-9-79	False Information or Identific	204	185	19	91%	15.62
41-29-139(a)(1)	C/S SELL, TRADE, BARTER DRUGS	201	148	53	74%	4.48

Summary of Arrests by Offense Code

Madison County Sheriff's Department 2012–2017

Offense Code	Offense	Number of Arrests			Black Percentage	Per Capita Ratio of Black to Non-Black ^[5]
		Total	Black	Non-Black		
21-23-7	Contempt of Court-Municipal Co	200	172	28	86%	9.85
97-17-33	Burglary - All but Dwelling	174	139	35	80%	6.37
97-3-7(1)	Simple Assault-Bodily Injury	166	135	31	81%	6.99
97-37-5	Felon Carrying Concealed Weapo	152	125	27	82%	7.43
63-3-1201	Reckless Driving	151	98	53	65%	2.97
97-19-55	Bad Checks - Penalties/Restitu	150	121	29	81%	6.69
97-19-39	False Pretenses	138	108	30	78%	5.78
97-17-41	Larceny - Grand	120	74	46	62%	2.58
97-3-7(2)	Aggravated Assault	119	100	19	84%	8.44
63-3-707	Improper Turn (No Turn Signal)	114	88	26	77%	5.43
97-23-93	Shoplifting	112	93	19	83%	7.85
99-21-1	Foreign Warrant;Fugitive;Holdi	111	68	43	61%	2.54
97-37-35	Possession of Stolen Firearm	102	85	17	83%	8.02
41-29-139(f)	Sale, Transfer, Manufacture, D	101	64	37	63%	2.77
97-21-33	Forgery	101	81	20	80%	6.50
63-11-40	Suspended Drivers License (Imp	96	72	24	75%	4.81
97-17-87	Trespass, Willful	96	62	34	65%	2.93
97-17-23	Burglary; Inhabited Dwelling H	94	82	12	87%	10.96
63-13-7	Motor Vehicles;Requirement of	93	75	18	81%	6.68
63-11-30(2)(C)	DUI - Third or Subsequent Conv	92	57	35	62%	2.61
43-19-37	Contempt of Court for Failure	91	63	28	69%	3.61
97-17-67	Malicious Mischief	85	60	25	71%	3.85
67-1-81 (2)	Alcohol, Minor in possession of alcohol	83	28	55	34%	0.82
97-17-43	Larceny - Petit	81	47	34	58%	2.22
97-23-19	Embezzlement - Agents/trustees	80	55	25	69%	3.53

Summary of Arrests by Offense Code

Madison County Sheriff's Department 2012–2017

Offense Code	Offense	Number of Arrests			Black Percentage	Per Capita Ratio of Black to Non-Black ^[5]
		Total	Black	Non-Black		
97-3-79	Robbery - Armed	76	72	4	95%	28.88
97-17-70	Receiving Stolen Property	75	62	13	83%	7.65
63-3-501	Speeding on State Highway	74	68	6	92%	18.18
63-3-809	Failure to Yield to Authorized	70	54	16	77%	5.41
97-3-7(1)(c)	Simple Assault-Attempt By Physi	67	57	10	85%	9.14
97-5-39(1)	Contributing to the Neglect or	64	35	29	55%	1.94
97-5-3	Desertion or non -support of	62	53	9	85%	9.45
63-11-21	DUI - Refusal to Submit to Tes	61	33	28	54%	1.89
97-19-21	Fraud - Credit Card	59	47	12	80%	6.28
41-29-152	Enhancement of Penalty for Dru	54	46	8	85%	9.22
97-17-33(1)	Burglary; All but Dwelling	52	42	10	81%	6.74
63-7-11	Driving Without Headlights	51	39	12	76%	5.21
97-3-95	Sexual Battery	51	35	16	69%	3.51
63-11-30(4)	DUI - Refusal or Inability to	50	34	16	68%	3.41
97-37-1	Carrying a Concealed Weapon/Fa	49	45	4	92%	18.05
63-3-609	Improper Lane Passing	47	40	7	85%	9.17
63-3-801	Failure to Yield	46	37	9	80%	6.59
63-3-619	Motor Vehicles; Distance to be	45	38	7	84%	8.71
63-3-403	Leaving The Scene Of An Accide	40	14	26	35%	0.86
97-3-7(4)	Aggravated Domestic Violence	39	31	8	79%	6.22
97-15-29	Littering	38	27	11	71%	3.94
49-7-101(1)	General Violations	36	28	8	78%	5.61
77-3-603	Telephone Harassment	35	21	14	60%	2.41
97-17-42	Taking Away of a Motor Vehicle	35	32	3	91%	17.11
95-3-19	Contempt of Court(Nuisance)	32	24	8	75%	4.81

Summary of Arrests by Offense Code

Madison County Sheriff's Department 2012–2017

Offense Code	Offense	Number of Arrests			Black Percentage	Per Capita Ratio of Black to Non-Black ^[5]
		Total	Black	Non-Black		
27-19-31	Motor Vehicle; Expired Tag	29	26	3	90%	13.90
47-7-27	Parole Violation	29	21	8	72%	4.21
63-7-33	Multiple-Beam Road-Lighting; F	29	24	5	83%	7.70
97-17-41(1)(a)	Grand Larceny; Personal Proper	29	18	11	62%	2.63
97-17-43(1)	Petit Larceny; Personal Proper	28	25	3	89%	13.37
97-3-53	Kidnaping	27	23	4	85%	9.22
97-35-23	Obstructing Public Streets, et	27	24	3	89%	12.83
21-13-1	General Ordinances; penalties	26	19	7	73%	4.35
97-3-107	Stalking	26	15	11	58%	2.19
63-7-31	Motor Vehicles; Multiple-Beam	25	18	7	72%	4.13
97-3-19(1)	Murder	23	21	2	91%	16.84
63-11-30(2)	DUI - First/subsequent Convict	21	11	10	52%	1.76
41-29-144	C/S PRESCRIPTION FRAUD	20	9	11	45%	1.31
97-15-37	Obstructing Public Highway	20	17	3	85%	9.09
97-19-85	Fraudulent Use of Identificatio	20	14	6	70%	3.74
97-9-125	Tampering	20	18	2	90%	14.44
97-1-5	Accessory After the Fact	19	18	1	95%	28.88
97-21-59	Counterfeit Instrument: Forger	18	14	4	78%	5.61
97-3-73	Robbery	18	15	3	83%	8.02
41-29-521	Contempt of Court for Violatio	17	6	11	35%	0.88
97-29-31	Indecent Exposure	17	14	3	82%	7.49
97-29-49	Prostitution;Unlawful to Engag	17	15	2	88%	12.03
97-5-1	Child, Abandonment of Child un	16	13	3	81%	6.95
97-9-72	Motor Vehicle:failure to stop	15	14	1	93%	22.46
63-3-601	Driving in more than one lane	14	12	2	86%	9.63

Summary of Arrests by Offense Code

Madison County Sheriff's Department 2012–2017

Offense Code	Offense	Number of Arrests			Black Percentage	Per Capita Ratio of Black to Non-Black ^[5]
		Total	Black	Non-Black		
97-17-35	Burglary - Possession of Burgl	14	12	2	86%	9.63
HLD Other Agency	Hold for other Agency	14	9	5	64%	2.89
43-47-19(1)	Unlawful for any Person to Abu	12	9	3	75%	4.81
63-3-505	Speeding: Failure to decrease	11	8	3	73%	4.28
97-1-7	Attempted Crime	11	10	1	91%	16.04
97-3-19(2)	Capital Murder	11	11	0	100%	-
97-37-29	Shoot into Dwelling	11	11	0	100%	-
97-45-19	Computer: Identity Theft or At	11	10	1	91%	16.04
63-3-1003	Failure to Yield Right-of-Way	10	9	1	90%	14.44
63-7-59	Window Tint Law	10	9	1	90%	14.44
99-37-7	Contempt; Default in Payment o	10	8	2	80%	6.42
45-33-33	Failure to Register Under Sex	9	7	2	78%	5.61
97-5-23	Touching Child for Lustful Pur	9	4	5	44%	1.28
97-9-127	RETALIATION AGAINST A PUBLIC SERVANT OR WITNESS	9	8	1	89%	12.83
63-3-703	Improper Turning at Intersecti	8	6	2	75%	4.81
97-35-13	Disturbance in Public Place	8	6	2	75%	4.81
97-35-47	False Reporting of a Crime	8	7	1	88%	11.23
97-5-40	Child Abuse - Condoning	8	7	1	88%	11.23
97-7-42	Fraud - Food Stamps	8	5	3	63%	2.67
97-9-55	Obstructing Justice/intimidati	8	8	0	100%	-
97-33-1	Gambling Illegally	7	7	0	100%	-
97-43-5	Rico - Racketeering	7	7	0	100%	-
99-19-81	Habitual Offenders Sentenced t	7	5	2	71%	4.01

Summary of Arrests by Offense Code

Madison County Sheriff's Department 2012–2017

Offense Code	Offense	Number of Arrests			Black Percentage	Per Capita Ratio of Black to Non-Black ^[5]
		Total	Black	Non-Black		
37-13-91	Compulsory School Attendance R	6	5	1	83%	8.02
41-29-139(c)	C/S ILLEGAL POSS PRESCRIPTION DRUGS	6	3	3	50%	1.60
41-29-139(g)	Trafficking in Controlled Subs	6	6	0	100%	-
63-1-69	Motor Vehicle Violation - Spec	6	2	4	33%	0.80
63-1-77	Driving Commercial M/Vehicle w	6	6	0	100%	-
63-5-49(4)	Failure to Stop and Submit Veh	6	6	0	100%	-
97-19-67	Bad Checks - Penalties/Restitu	6	2	4	33%	0.80
97-23-103	Home Repair Fraud	6	0	6	0%	0.00
97-23-27	Embezzlement - Property Borrow	6	2	4	33%	0.80
97-35-37	Vagrancy	6	3	3	50%	1.60
Missing Code ^[6]	Missing Offense ^[6]	6	3	3	50%	1.60
63-1-41	Possession and Display of Lice	5	4	1	80%	6.42
63-7-64	Motorcycle or Motor Scooter Cr	5	2	3	40%	1.07
97-17-41(4)	Grand Larceny;Motor Vehicle,Se	5	3	2	60%	2.41
97-5-33	Exploitation of Children	5	3	2	60%	2.41
97-5-49	SOCIAL HOST	5	0	5	0%	0.00
97-9-65	Intimidation of Witness to Com	5	4	1	80%	6.42
29-7-21	Fishing Without a License	4	3	1	75%	4.81
49-7-31(1)(vi)	Hunting - unlawful to hunt dee	4	2	2	50%	1.60
49-7-57	Possession of Illegal Game	4	2	2	50%	1.60
63-13-19	Motor Vehicles;Inspections by	4	3	1	75%	4.81
63-3-605	Driving Upon One-Way Roadways	4	3	1	75%	4.81
7-5-303	Insurance Fraud	4	3	1	75%	4.81
97-19-17	Credit Cards - Forgery	4	3	1	75%	4.81

Summary of Arrests by Offense Code

Madison County Sheriff's Department 2012–2017

Offense Code	Offense	Number of Arrests			Black Percentage	Per Capita Ratio of Black to Non-Black ^[5]
		Total	Black	Non-Black		
97-19-71(2)	Fraud; Food Stamps	4	2	2	50%	1.60
97-25-55(2)	Assault with Intent to Commit	4	2	2	50%	1.60
97-3-109	Drive-by Shooting	4	4	0	100%	-
97-3-54	Human Trafficking	4	4	0	100%	-
97-41-1	Animals, Cruelty to	4	4	0	100%	-
97-5-39(2)	Child, Abuse/Battery Causing Se	4	4	0	100%	-
27-19-59	Motor Vehicle; Improper Registr	3	2	1	67%	3.21
33-13-471	Military - Absent without leav	3	2	1	67%	3.21
45-35-13	Identification Cards; Unlawful	3	2	1	67%	3.21
63-11-30(5)	DUI-Mutilation/Disfigurement/D	3	2	1	67%	3.21
63-25-5(3)(A)	Motor Vehicle: Possession W/al	3	3	0	100%	-
63-3-321	Destruction, Removal, Etc. of D	3	2	1	67%	3.21
63-3-516	Speed Limits Within Highway Wo	3	2	1	67%	3.21
63-3-603	Motor Vehicles; Driving on Road	3	2	1	67%	3.21
63-3-909	Parking of Unattended Motor Ve	3	3	0	100%	-
97-1-3	Accessory Before the Fact	3	2	1	67%	3.21
97-1-6	Directing/causing Felony by Pe	3	3	0	100%	-
97-17-61	Larceny; Taking or Carrying Awa	3	2	1	67%	3.21
97-17-97	Trespass after Notice of Non-p	3	1	2	33%	0.80
97-19-83	Fraud - by Mail/phone/newspape	3	2	1	67%	3.21
97-21-29	Making and Uttering Instrument	3	3	0	100%	-
97-3-65(4)(a)	Rape	3	3	0	100%	-
97-3-75	Robbery - Simple	3	3	0	100%	-
97-31-21	Manufacturing or Distilling Un	3	1	2	33%	0.80
97-45-17	Computer: Posting of Email/Ele	3	2	1	67%	3.21

Summary of Arrests by Offense Code

Madison County Sheriff's Department 2012–2017

Offense Code	Offense	Number of Arrests			Black Percentage	Per Capita Ratio of Black to Non-Black ^[5]
		Total	Black	Non-Black		
97-7-43	Impersonating an Officer	3	2	1	67%	3.21
97-9-45	Escape - MDOC	3	0	3	0%	0.00
97-9-49(1)	Escape of Prisoners	3	2	1	67%	3.21
97-9-59	Perjury Definitions	3	3	0	100%	-
41-29-146	Controlled/counterfeit Substan	2	1	1	50%	1.60
43-13-213	False/fraudulent claim for Med	2	2	0	100%	-
49-7-8	Hunting and fishing w/o licens	2	2	0	100%	-
49-7-95	Deer; Headlighting	2	0	2	0%	0.00
63-1-6	Requirement of Motorcycle Opera	2	2	0	100%	-
63-11-30(1)	Motor Vehicle:operation of mot	2	2	0	100%	-
63-13-9	Motor Vehicles;Details of Insp	2	2	0	100%	-
63-25-5	Motor Vehicle Chop Shop	2	2	0	100%	-
63-3-617	Driving in Center of Highway/R	2	1	1	50%	1.60
63-5-7	Vehicle:operation of oversized	2	1	1	50%	1.60
63-7-51	Improper Equipment(Brakes)	2	1	1	50%	1.60
67-1-81	Alcohol, Sale to Minors	2	2	0	100%	-
75-73-9	Fraud - Innkeeper	2	1	1	50%	1.60
75-85-19	Operation of Transient Busines	2	2	0	100%	-
97-15-13	Hunting, Shooting on or Across	2	0	2	0%	0.00
97-17-29	Burglary;Breaking Inner Door o	2	1	1	50%	1.60
97-17-41(1)(b)	Grand Larceny; Property of a C	2	1	1	50%	1.60
97-17-64	Theft by Rental Agreement	2	2	0	100%	-
97-19-23	Fraud - Credit Card	2	2	0	100%	-
97-19-33	False Impersonation	2	2	0	100%	-
97-19-35	False Personation	2	1	1	50%	1.60

Summary of Arrests by Offense Code

Madison County Sheriff's Department 2012–2017

Offense Code	Offense	Number of Arrests			Black Percentage	Per Capita Ratio of Black to Non-Black ^[5]
		Total	Black	Non-Black		
97-21-37	Counterfeit Instrument: Poss.	2	2	0	100%	-
97-21-49	Counterfeit Instrument: Sale o	2	2	0	100%	-
97-23-23	Embezzlement - Receiving Stole	2	1	1	50%	1.60
97-29-61	Voyeurism (Peeping Tom)	2	0	2	0%	0.00
97-3-104	Sexual Penetration of Incarcer	2	2	0	100%	-
97-3-117	Carjacking/Attempted Carjackin	2	2	0	100%	-
97-3-117(2)	Armed Carjacking/Attempted Arm	2	2	0	100%	-
97-3-25	Manslaughter	2	2	0	100%	-
97-3-65(1)	Statutory Rape	2	2	0	100%	-
97-33-9	Gambling - unlawful to keep, e	2	2	0	100%	-
97-35-51	Motor Vehicle; failure to stop	2	2	0	100%	-
97-45-15(1)(a)	Computer: Email/Electronic Com	2	0	2	0%	0.00
97-5-5	Enticing child for concealment	2	2	0	100%	-
97-7-10	Making Fraudulent Statements/r	2	2	0	100%	-
97-7-29	Destroying, Injuring, etc Prope	2	1	1	50%	1.60
97-9-105	Hindering prosecution in the First degree	2	2	0	100%	-
97-9-25	Escape - Aid/abet	2	1	1	50%	1.60
97-9-29	Escape - Aid-abet	2	0	2	0%	0.00
17-17-29	Waste, Solid - Illegal Disposa	1	1	0	100%	-
19-5-317	Abusive Calls to Emergency Tel	1	1	0	100%	-
23-15-17	False Registration	1	1	0	100%	-
23-15-751	Offenses by Registrar or Commi	1	1	0	100%	-
27-19-56(5)	Motor Vehicle; Handicapped, Ill	1	1	0	100%	-
27-3-79	Tax Evasion	1	0	1	0%	0.00
37-41-2	Interference with Operation of	1	1	0	100%	-

Summary of Arrests by Offense Code

Madison County Sheriff's Department 2012–2017

Offense Code	Offense	Number of Arrests			Black Percentage	Per Capita Ratio of Black to Non-Black ^[5]
		Total	Black	Non-Black		
41-29-139(a)(2)	Counterfeit Substance: Possess	1	1	0	100%	-
41-29-141(1)	Controlled Substance:(Pharmaci	1	1	0	100%	-
41-29-313(1)	POSS OF PRECURSOR	1	0	1	0%	0.00
41-53-11	Dogs Running at Large	1	0	1	0%	0.00
47-5-193	Unlawful for Officer to Furnis	1	1	0	100%	-
47-5-198	Sale, Possession of Use of Con	1	1	0	100%	-
49-7-21	Hunting,Trapping or Fishing Wi	1	0	1	0%	0.00
49-7-55	Unlawful Possession,etc. of an	1	0	1	0%	0.00
59-21-83	Boats&Other Vessels;Operation	1	0	1	0%	0.00
63-13-3	Motor Vehicles; Operation of V	1	1	0	100%	-
63-3-319	Interference with Official Tra	1	1	0	100%	-
63-3-407	Accident, Vehicle Unattended	1	1	0	100%	-
63-3-411	Drivers Involved In Accidents	1	1	0	100%	-
63-3-515	Speed Limits Near Schools and	1	1	0	100%	-
63-3-613	Overtaking&Passing Upon Right	1	1	0	100%	-
63-3-701	Starting of Stopped,Standing,	1	1	0	100%	-
67-1-17	Unlawful Possession of Alochol	1	1	0	100%	-
67-3-70	Beer/wine, Furnishing to less	1	0	1	0%	0.00
75-85-5	Transient vendor transact busi	1	1	0	100%	-
83-39-29	Bond-jumping	1	0	1	0%	0.00
97-11-11	Bribery - to Influence Action	1	1	0	100%	-
97-11-13	Bribery;Acceptance by Officer,	1	1	0	100%	-
97-11-25	Embezzlement - Officers/truste	1	0	1	0%	0.00
97-11-53	Bribery	1	1	0	100%	-
97-13-19	Corrupt Conduct by Election Of	1	1	0	100%	-

Summary of Arrests by Offense Code

Madison County Sheriff's Department 2012–2017

Offense Code	Offense	Number of Arrests			Black Percentage	Per Capita Ratio of Black to Non-Black ^[5]
		Total	Black	Non-Black		
97-13-39	Intimidating Elector to Preven	1	1	0	100%	-
97-15-30(2)	Unlawful to Throw, Scatter, Spil	1	1	0	100%	-
97-17-25	Burglary; Breaking Out of Dwel	1	1	0	100%	-
97-17-33(2)	Burglary; Church, Synagogue, T	1	1	0	100%	-
97-17-39(B)	Public Property, Church Buildi	1	1	0	100%	-
97-17-43(2)	Petit Larceny; Property of a Ch	1	1	0	100%	-
97-17-43(3)	Petit Larceny; Motor Fuel	1	1	0	100%	-
97-17-5	Arson - Structure: Not Dwellin	1	1	0	100%	-
97-17-85	Trespass upon Enclosed Land of	1	0	1	0%	0.00
97-19-37	False Personation; Masqueradin	1	1	0	100%	-
97-19-71(4)	Fraud; Filing for Services Not	1	1	0	100%	-
97-29-45	Telephone or Electronic Commun	1	0	1	0%	0.00
97-29-51	Prostitution; Procuring Females	1	1	0	100%	-
97-29-63	Photographing or filming anoth	1	0	1	0%	0.00
97-3-47	Manslaughter (Culpable Neglige	1	1	0	100%	-
97-3-65	Rape; Carnal Knowledge of Chil	1	1	0	100%	-
97-3-71	Rape - Assault with Intent to	1	1	0	100%	-
97-35-1	Bus, Disorderly Conduct on	1	1	0	100%	-
97-35-25	Street, Obstructing	1	1	0	100%	-
97-37-17(2)	97-37-17(2) Weapons, P	1	1	0	100%	-
97-37-19	Discharging/Displaying firearm	1	1	0	100%	-
97-37-35(1)	Possess, Receive, Retain, Acquire	1	0	1	0%	0.00
97-5-23(1)	Touching Child for Lustful Pur	1	0	1	0%	0.00
97-5-23(3)	Computer luring of person unde	1	1	0	100%	-

Summary of Arrests by Offense Code

Madison County Sheriff's Department 2012–2017

Offense Code	Offense	Number of Arrests			Black Percentage	Per Capita Ratio of Black to Non-Black ^[5]
		Total	Black	Non-Black		
97-5-27	Sexually-oriented Material: Di	1	0	1	0%	0.00
97-5-7	Child, Enticing from Parents	1	1	0	100%	-
97-7-13	Conspiracy to Defraud State;De	1	1	0	100%	-
97-9-41	Harboring a Fugitive	1	1	0	100%	-
97-9-49(2)	Escape - Inmates/trusties	1	1	0	100%	-
97-9-9	Bribery;Commercial Bribery	1	1	0	100%	-
99-19-83	Habitual Offenders Sentenced t	1	1	0	100%	-
99-23-1	Peace Bond: Issuance of Warran	1	1	0	100%	-
B26	UTT B26-DRV WHILE LIC SUSPEND	1	1	0	100%	-
B53	UTT B53-EXPIRED TAG/NO TAG	1	1	0	100%	-
D36	UTT D36-NO PROOF OF LIAB INS	1	1	0	100%	-
M14	UTT M14-DISREGARD TRF DEV	1	1	0	100%	-

Source: ACLU12TO17.CSV

Note:

[1] Offenses are grouped by offense code.

[2] This tabulation was conducted under the assumption that an individual can only be arrested once a day for the same offense. For this reason, the data is de-duplicated by first name, last name, gender, race, date, and offense code.

[3] Individuals identified with race "B" are grouped as "Black," and individuals identified with any other race are grouped as "Non-Black."

[4] The descriptions of the offense codes correspond to the descriptions set forth in ACLU12TO17.CSV. In certain instances, the descriptions appear to have been cut off in ACLU12TO17.CSV.

[5] To calculate the Per Capita Ratio, I first calculate the number of Black individuals arrested per offense code. I then divide that number by the population of Black residents in Madison County as of July 1, 2016. This is 38.4% of 105,114 (the total population of Madison County). This figure is the number of Black arrests per capita for each offense code in Madison County. I calculate the same figure for Non-Black residents of Madison County (61.6% of 105,114). The Per Capita Ratio is the number of Black arrests per capita, divided by the number of Non-Black arrests per capita.

[6] There are six observations in ACLU12TO17.CSV that have no offense code and no offense description. These are displayed in the table as "Missing Code" and "Missing Offense."

Summary of Citations by Violation Category

Madison County Sheriff's Department 2012–2017

Violation Category	Number of Citations			Black Percentage	Per Capita Ratio of Black to Non-Black ^[4]
	Total	Black	Non-Black		
No Proof Of Liability Insurance	7,148	5,511	1,637	77%	5.40
Improper / No Tag	2,849	1,800	1,049	63%	2.75
Improper / No Driver's License	2,523	1,788	735	71%	3.90
Driving With A Suspended License	2,465	2,070	395	84%	8.41
Seatbelt Violation	1,902	1,412	490	74%	4.62
Disregard for Traffic Device	1,806	1,081	725	60%	2.39
DUI	1,352	864	488	64%	2.84
Careless Driving	1,285	769	516	60%	2.39
No Category Assigned	1,066	724	342	68%	3.40
Improper Equipment	991	703	288	71%	3.92
Child Restraint Violation	639	599	40	94%	24.02
Improper Passing	204	129	75	63%	2.76
Reckless Driving	201	125	76	62%	2.64
Failure To Yield	190	138	52	73%	4.26
DUI Second Offense	173	121	52	70%	3.73
Improper Turn	124	88	36	71%	3.92
Speeding 10 - 19 MPH	119	72	47	61%	2.46
Speeding 20 MPH And Over	115	77	38	67%	3.25
DUI First Offense	101	70	31	69%	3.62
Following Too Closely	100	76	24	76%	5.08
Speeding 1 - 9 MPH	55	33	22	60%	2.41
Move Over Law	32	27	5	84%	8.66
Improper / No Inspection Sticker	12	8	4	67%	3.21
Speeding	1	0	1	0%	0.00

Source: ACLU FOIA Request 02052018 V1.xlsx; U.S. Census Bureau

Note:

[1] Violations are grouped by violation categories. These categories are created as a data cleaning measure to combine citation violations that are similar.

[2] The tabulation was conducted under the assumption that an individual can only be cited once a day for the same violation. For this reason, the data is de-duplicated by name, gender, date, race, violation, and ticketing agency.

[3] Individuals identified with race "B" are grouped as "Black," and individuals identified with any other race are grouped as "Non-Black."

[4] To calculate the Per Capita Ratio, I first calculate the number of Black individuals cited per violation category. I then divide that number by the population of Black residents in Madison County as of July 1, 2016. This is 38.4% of 105,114 (the total population of Madison County). This figure is the number of Black citations per capita for each violation category in Madison County. I calculate the same figure for Non-Black residents of Madison County (61.6% of 105,114). The Per Capita Ratio is the number of Black citations per capita, divided by the number of Non-Black citations per capita.

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF MISSISSIPPI
JACKSON DIVISION

-----x

LATOYA BROWN; LAWRENCE BLACKMON;
HERBERT ANTHONY GREEN; KHADAFY
MANNING; QUINETTA MANNING; MARVIN
McFIELD, NICHOLS SINGLETON; STEVEN
SMITH; BESSIE THOMAS; and BETTY JEAN
WILLIAMS TUCKER, individually and on behalf
of a class of all other similarly situated,
Plaintiffs,
Civil Action No.
-against- 3:17-cv-347 WHB LRA

MADISON COUNTY, MISSISSIPPI,
SHERIFF RANDAL S. TUCKER, in his
official capacity; and MADISON COUNTY
SHERIFF'S DEPUTIES JOHN DOES #1 through
#6, in their individual capacities,
Defendants.

-----x

April 18, 2018
8:58 a.m.

Deposition of RAHUL K. GUHA, PH.D, taken
by Defendants, pursuant to Notice, at the
offices of Simpson Thacher & Bartlett, 425
Lexington Avenue, New York, New York, before
William Visconti, a Shorthand Reporter and
Notary Public within and for the State of New
York.

RAHUL K. GUHA, PH.D., 4/18/2018

Page 2	Page 4
<p>1 2 APPEARANCES: 3 SIMPSON THACHER & BARTLETT LLP 4 Attorneys for Plaintiffs 5 425 Lexington Avenue 6 New York, NY 10017 7 BY: KAVITHA SIVASHANKER, ESQ. 8 kavitha.sivashanker@stblaw.com 9 CHRISTOPHER SHIELDS, ESQ. 10 christopher.shields@stblaw.com 11 12 AMERICAN CIVIL LIBERTIES UNION OF 13 MISSISSIPPI FOUNDATION 14 Attorneys for Plaintiffs 15 233 East Capitol Street 16 Jackson, Mississippi 39201 17 BY: JOSHUA TOM, ESQ. 18 jtom@aclu-ms.org 19 (Via Telephone) 20 WISE CARTER CHILD & CARAWAY, P.A. 21 Attorneys for Defendants 22 600 Heritage Building 23 401 East Capitol Street 24 Jackson, Mississippi 39201 25 BY: CHARLES E. ROSS, ESQ. cer@wisecarter.com T. RUSSEL NOBILE, ESQ. trn@wisecarter.com PETTIS, BARFIELD & HESTER, PA Attorneys for Defendants 4450 Old Canton Road, Suite 210 Jackson, Mississippi 39211 BY: JASON DARE, ESQ. jdare@pbhfirm.com (Via telephone)</p>	<p>1 RAHUL K. GUHA, PH.D, 2 having been first duly sworn by the Notary Public, 3 was examined and testified as follows: 4 EXAMINATION CONDUCTED BY MR. ROSS: 5 Q. Dr. Guha, did I pronounce that 6 correctly? 7 A. That's correct. 8 Q. I'm Charlie Ross from Mississippi 9 this is Russ Nobile from Mississippi we will be 10 taking your deposition today. 11 MR. ROSS: Housekeeping matter. I 12 premarked the Notice Of Deposition as 13 Exhibit 1. I premarked your CV which was 14 sent yesterday as Exhibit 2 and your report 15 as Exhibit 3. 16 (Exhibit 1 for identification, 17 Notice of Deposition.) 18 (Exhibit 2 for identification, Dr. 19 Guha's CV.). 20 (Exhibit 3 for identification, Dr. 21 Guha's expert report.) 22 Q. We will be discussing some of 23 those as we go along so I will hand them over 24 to you. 25 MS. SIVASHANKER: Counsel, do you</p>
Page 3	Page 5
<p>1 2 IT IS HEREBY STIPULATED AND AGREED 3 by and between the attorneys for the 4 respective parties herein that filing and 5 sealing be and the same are hereby waived. 6 IT IS FURTHER STIPULATED AND AGREED 7 that all objections, except as to the form 8 of the question, shall be reserved to the 9 time of the trial. 10 IT IS FURTHER STIPULATED AND AGREED 11 that the within deposition may be signed 12 and sworn to before any officer authorized 13 to administer an oath with the same force and 14 effect as if signed and sworn to before the 15 Court. 16 17 18 19 20 21 22 23 24 25</p>	<p>1 have copies. 2 MR. ROSS: I have a copy of the 3 report, I don't have a copy of the CV. 4 MS. SIVASHANKER: No, that's fine. 5 Q. Doctor, I assume you have given 6 depositions before, right? 7 A. I have. 8 Q. A couple of basic ground rules and 9 I will go overall them. If you don't understand my 10 question ask me to repeat it. Okay? 11 A. I will. 12 Q. If I ask the question and you 13 answer it I'm going to assume that you 14 understood it. Okay? 15 A. That's correct. 16 Q. You can take a break at any time, 17 but if there is a pending question, question 18 pending, I will ask you to answer the question 19 and then we will take a break. Okay? 20 A. Okay. 21 Q. Look at Exhibit 2, please. Which 22 is your CV. I want to ask you about your 23 education. You originally from India, I 24 assume? 25 A. That's correct, I was born in</p>

2 (Pages 2 to 5)

Page 6	Page 8
<p>1 India.</p> <p>2 Q. You got your bachelor's degree</p> <p>3 from Jadavpur University. Did I pronounce that</p> <p>4 correctly?</p> <p>5 A. Yes.</p> <p>6 Q. That is in electronic and</p> <p>7 telecommunications engineering; is that right?</p> <p>8 A. That's correct.</p> <p>9 Q. Did you take any courses in your</p> <p>10 undergraduate work dealing with criminal</p> <p>11 justice or law enforcement?</p> <p>12 A. I did not.</p> <p>13 Q. And then you got your MBA at the</p> <p>14 Indian Institute Of Management in Calcutta.</p> <p>15 Did you take any courses in your MBA studies</p> <p>16 dealing with criminal justice or law enforcement?</p> <p>17 A. I did not.</p> <p>18 Q. And then you got your Ph.D. at</p> <p>19 Cornell in 1996 and it looks like you got</p> <p>20 another master's degree there; is that correct?</p> <p>21 A. That's correct.</p> <p>22 Q. What was your course of study at</p> <p>23 Cornell?</p> <p>24 A. The Ph.D. was granted in the field</p> <p>25 of management. There were three fields,</p>	<p>1 enforcement or criminal justice matters?</p> <p>2 A. They do not.</p> <p>3 Q. On the third page of Exhibit 2</p> <p>4 under prior testimony it lists -- you list six</p> <p>5 cases. Does any of that testimony involve</p> <p>6 criminal justice or law enforcement?</p> <p>7 A. No, they are not.</p> <p>8 Q. With any of those six cases, were</p> <p>9 you retained by Simpson Thacher or was</p> <p>10 Cornerstone retained by Simpson Thacher?</p> <p>11 A. No, none of those cases involve</p> <p>12 retention by Simpson Thacher.</p> <p>13 Q. Have you ever worked for Simpson</p> <p>14 Thacher before?</p> <p>15 A. I have.</p> <p>16 Q. In what context?</p> <p>17 A. I have worked on antitrust cases</p> <p>18 and breach of contract cases in the past with</p> <p>19 Simpson Thacher.</p> <p>20 Q. Are you currently doing any work</p> <p>21 for Simpson Thacher?</p> <p>22 A. I'm not retained on any cases with</p> <p>23 Simpson Thacher currently.</p> <p>24 MS. SIVASHANKER: Just to clarify.</p> <p>25 Other than this case, correct?</p>
Page 7	Page 9
<p>1 economics, quantitative methods and marketing.</p> <p>2 Q. So explain that to me. Was yours</p> <p>3 in management, economics or quantitative</p> <p>4 economics?</p> <p>5 A. I was at the Johnson Graduate</p> <p>6 School of management which is the business</p> <p>7 school. So the Ph.D. is granted in the field</p> <p>8 of management. But every person who graduates</p> <p>9 from the Ph.D. program at the business school</p> <p>10 has to have three fields in order to graduate.</p> <p>11 My three fields were economics, marketing and</p> <p>12 quantitative methods.</p> <p>13 Q. What is quantitative methods?</p> <p>14 A. For the most part it's another</p> <p>15 term for statistics and related fields, but</p> <p>16 essentially it involves taking course work in</p> <p>17 the area of statistics broadly.</p> <p>18 Q. At Cornell did you take any</p> <p>19 courses related to criminal justice or law</p> <p>20 enforcement?</p> <p>21 A. I did not.</p> <p>22 Q. Now, looking at your CV which is</p> <p>23 Exhibit 2, you have some teaching experience</p> <p>24 listed on the last page of your CV. Does any</p> <p>25 of that teaching experience deal with law</p>	<p>1 THE WITNESS: Other than this one,</p> <p>2 I'm sorry. Obviously, yes.</p> <p>3 Q. Is Cornerstone currently retained</p> <p>4 on the other cases by Simpson Thacher other</p> <p>5 than this case?</p> <p>6 A. I don't know that.</p> <p>7 Q. Going back to your CV, Exhibit 2,</p> <p>8 "Publications And Working Papers." Do you see</p> <p>9 that category?</p> <p>10 A. I do.</p> <p>11 Q. Do any of your publications or</p> <p>12 working papers dealing with criminal justice or</p> <p>13 law enforcement?</p> <p>14 A. They do not.</p> <p>15 Q. Going to Exhibit 2, "Invited</p> <p>16 Lectures And Presentations." Do any of the</p> <p>17 invited lectures and presentations deal with</p> <p>18 criminal justice or law enforcement?</p> <p>19 A. No, they do not.</p> <p>20 Q. Have you ever had any training in</p> <p>21 criminal justice or law enforcement?</p> <p>22 MS. SIVASHANKER: Objection to</p> <p>23 form.</p> <p>24 A. I have not.</p> <p>25 Q. You obtained your bachelor's</p>

3 (Pages 6 to 9)

Page 10	Page 12
<p>1 degree in 1989, did you go directly into grad</p> <p>2 school?</p> <p>3 A. I did.</p> <p>4 Q. And then you got your Ph.D. in</p> <p>5 1996, did you go directly into your Ph.D.</p> <p>6 program?</p> <p>7 A. Yes, I did.</p> <p>8 Q. Did you do any type of</p> <p>9 professional work while you were in grad school</p> <p>10 or while you were in the Ph.D. program?</p> <p>11 A. I was given an opportunity to</p> <p>12 teach MBA courses in 1994 and 1995. That's</p> <p>13 highlighted in my CV, other than my research</p> <p>14 assistantship this was a separate opportunity</p> <p>15 where I had an opportunity to teach the</p> <p>16 full-time MBA students.</p> <p>17 Q. So you finished your Ph.D. program</p> <p>18 in '96 and came to work at Cornerstone; is that</p> <p>19 correct?</p> <p>20 A. That's correct.</p> <p>21 Q. Have you worked anywhere else</p> <p>22 other than Cornerstone since 1996?</p> <p>23 A. For a brief period, it is not on</p> <p>24 my CV, I worked for a management consulting</p> <p>25 firm, called Mercer Management Consulting.</p>	<p>1 that is yes.</p> <p>2 Q. Tell me what that experience was?</p> <p>3 A. So, I think there were criminal</p> <p>4 cases, antitrust criminal Section 1 cases</p> <p>5 brought related to price fixing and I'm trying</p> <p>6 to think of the specifics. This was a long</p> <p>7 time ago, but one that I can remember was a</p> <p>8 Section 1 Sherman Act case against the CEOs of</p> <p>9 Sotheby's and Christies. That I believe was a</p> <p>10 criminal matter. That is one that I can think</p> <p>11 of.</p> <p>12 There are a couple of others that</p> <p>13 I can think of in which the -- there were</p> <p>14 criminal cases where either the Department Of</p> <p>15 Justice or other agencies were suing</p> <p>16 individuals for price fixing or other related</p> <p>17 kinds of things. I don't remember all the</p> <p>18 cases offhand. I do remember the Sotheby's and</p> <p>19 Christies cases but that was from a long time</p> <p>20 ago.</p> <p>21 Q. So all of these cases that may</p> <p>22 have involved criminal charges were antitrust</p> <p>23 cases?</p> <p>24 A. I'm not a hundred percent of that.</p> <p>25 The antitrust one I can remember. I'm not a</p>
Page 11	Page 13
<p>1 Q. What did you do for Mercer?</p> <p>2 A. Management consulting projects,</p> <p>3 specifically on cases where there was a need</p> <p>4 for statistical or econometric expertise.</p> <p>5 Q. What years were you at Mercer?</p> <p>6 A. I was there for a year. After I</p> <p>7 joined Cornerstone I left and rejoined</p> <p>8 Cornerstone after a year or less. So I was</p> <p>9 gone for a period of less than a year between</p> <p>10 '97 and '98.</p> <p>11 Q. At Mercer was your work litigation</p> <p>12 related?</p> <p>13 A. It was not.</p> <p>14 Q. Did any of your work at Mercer</p> <p>15 involve law enforcement or criminal justice</p> <p>16 matters?</p> <p>17 A. It did not.</p> <p>18 Q. Other than this case, has any</p> <p>19 of your work at Cornerstone involved law</p> <p>20 enforcement or criminal justice matters?</p> <p>21 MS. SIVASHANKER: Objection to</p> <p>22 form.</p> <p>23 A. I'm trying to think, yes. Yes.</p> <p>24 With the caveat that I probably will get the</p> <p>25 legal specifics wrong, but yes, the answer to</p>	<p>1 hundred percent whether the others might have</p> <p>2 involved violations of the securities laws or</p> <p>3 market manipulation, I don't remember. But the</p> <p>4 one that I just mentioned, the auction houses,</p> <p>5 was definitely a violation of the antitrust</p> <p>6 laws.</p> <p>7 Q. The only ones that you can recall</p> <p>8 were antitrust laws?</p> <p>9 MS. SIVASHANKER: Objection to</p> <p>10 form.</p> <p>11 A. As of right now, that's the one</p> <p>12 that most immediately jumps to mind.</p> <p>13 Q. With those antitrust cases were</p> <p>14 you just doing an analysis to see if there was</p> <p>15 antitrust violation?</p> <p>16 MS. SIVASHANKER: Objection to</p> <p>17 form.</p> <p>18 A. So, you know, as you know, I'm not</p> <p>19 a lawyer, so really the role that I play on cases is to</p> <p>20 analyze data that might be pertinent to an</p> <p>21 evaluation by the lawyers in some way or the</p> <p>22 other. But I really don't bring any legal</p> <p>23 expertise to the table.</p> <p>24 Again this is long time back, but</p> <p>25 in a case like that it would essentially have</p>

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<p>1 been an analysis of data having to do with 2 sales at Southey's or Christies. So it is 3 really the use of data and statistics is really 4 what I bring to all cases including the one 5 that involved criminal charges. 6 Q. Have you ever been retained by a 7 law enforcement agency other than the lawyers 8 at the Justice Department? 9 A. I have been retained by the 10 Federal Trade Commission. Again that's the one 11 that comes readily to mind. The Department Of 12 Justice and the Federal Trade Commission are 13 the two that come to mind. 14 Q. And you were retained by lawyers 15 involved in litigation in those cases, right? 16 MS. SIVASHANKER: Objection to 17 form. 18 A. Not necessarily only litigation, 19 but it could have been investigations as well. 20 So for example, I can think of the 21 last case that I did with the Federal Trade 22 Commission in which there wasn't a case, the 23 FTC hadn't filed suit but they were investigating 24 certain practices and that was the context in 25 which I was retained.</p>	<p>1 Q. Have you ever assisted a police 2 officer in executing a warrant? 3 MS. SIVASHANKER: Objection to 4 form. 5 A. I have not. 6 Q. Have you ever even rode in a 7 patrol car? 8 A. I don't believe so. 9 Q. Do you have any experience as a 10 geographer? 11 MS. SIVASHANKER: Objection to 12 form. 13 A. No, I don't. 14 Q. Do you know who Mr. Ricchetti is? 15 A. Ricchetti? 16 Q. Ricchetti, yes. 17 A. Yes, I do. But I'm assuming that 18 you're referring to Brian Ricchetti at Cornerstone who 19 I do know. 20 Q. That's right. Have you talked to 21 him about this case? 22 A. I have not. 23 Q. Do you know what GIS is, 24 Geographical Information System? 25 A. I don't believe so.</p>
Page 15	Page 17
<p>1 Q. Other than this case, have you 2 ever been involved in a situation involving a 3 local sheriff's department? 4 MS. SIVASHANKER: Objection to 5 form. 6 A. Not that I can recall. 7 Q. Involving a city police force? 8 A. I don't recall. I mean I work on 9 numerous class actions and it is possible that 10 a local city force was part of the class or was 11 part the named Plaintiffs in such a class 12 action, but offhand I don't recall. 13 Q. Have you ever assisted a police 14 officer in making an arrest? 15 MS. SIVASHANKER: Objection to 16 form. 17 A. I have not. 18 Q. Have you ever assisted a police 19 officer in conducting a traffic safety roadblock? 20 A. I have not. 21 Q. Have you ever assisted a police 22 officer in searching a home? 23 MS. SIVASHANKER: Objection to 24 form. 25 A. I have not.</p>	<p>1 Q. Other than this case, have you 2 ever been involved in a matter where there were 3 allegations of racial profiling? 4 MS. SIVASHANKER: Objection to 5 form. 6 A. I don't believe so. 7 Q. I'm going to ask you about 8 Cornerstone. I looked at your website. You're 9 listed as a senior vice president; is that 10 right? 11 A. That is correct. 12 Q. What are your duties as a senior 13 vice president? 14 A. My duties can broadly be split 15 into two parts. One part consists of doing 16 client work and billable work. So we are 17 retained on cases that require economic 18 analysis or analysis of data and so forth and 19 usually a part of my time is spent on cases. 20 The other part of my time is 21 broadly related to other things that are not 22 billable but nevertheless we are expected to 23 engage in. And those would include things like 24 recruiting, things like training and mentoring, 25 things like writing articles on certain areas</p>

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<p style="text-align: right;">Page 18</p> <p>1 that one might have expertise in and working on 2 a case such as this, on a pro bono basis, for 3 example, would broadly fall under that other 4 category of things outside of the billable 5 work. 6 Q. On the website it also talked 7 about principals, senior economists and senior 8 VPs and associates. What is a principal here 9 at Cornerstone? 10 A. If I may answer the question 11 chronologically. Typically we hire people in 12 the career track out of Ph.D. programs and they 13 join at a position that we call associates. As 14 they gain experience in the firm after about 15 roughly seven or eight years if they are doing 16 well and progressing as we expect them in their 17 career they get promoted to a position called 18 principal. It really means that it's a 19 position that signifies that the person is 20 senior enough to take on leadership roles on 21 both project work as well as on what I have 22 loosely described as nonbillable 23 responsibilities. From there on people 24 progress further to become vice presidents. 25 Q. So, is everybody that progresses</p>	<p style="text-align: right;">Page 20</p> <p>1 if a principal is, quote unquote, doing well in 2 his or her career, that person will be expected 3 to progress to vice president. The caveat is 4 that there are very specific expectations in 5 terms of what it takes to make the jump from 6 principal to vice president. Other than that I 7 think you're description is generally okay. 8 Q. You mentioned client work and 9 you -- you do client work on an hourly basis; 10 is that correct? 11 MS. SIVASHANKER: Objection. 12 Q. When you work for clients you 13 charge on an hourly basis? 14 MS. SIVASHANKER: Objection to 15 form. 16 A. That is correct for the most part. 17 Q. And then for what you called 18 non-billable work, recruiting, training, mentoring, 19 writing articles and pro bono work, how much 20 time do you spend on client work as opposed to 21 that non-billable work? 22 A. At this point in my career it is 23 probably close to 50/50. That was obviously -- 24 that has obviously evolved over time. 25 Q. Do you keep -- I assume that you</p>
<p style="text-align: right;">Page 19</p> <p>1 further beyond principal a vice president? 2 MS. SIVASHANKER: Objection to 3 form. 4 A. I mean there is no fixed timeline 5 in the sense that not every principal is guaranteed 6 to become a vice president, but if -- let me 7 put it this way, if a principal does progress 8 further the next step in this progression would 9 be a vice president. 10 Q. What I'm kind of getting at is, in 11 a lot of corporations or businesses you have a 12 president and then you maybe two or three vice 13 presidents for human resources, for marketing, 14 for operations, but everybody that reaches 15 senior management is not necessarily a vice 16 president. It sounds like here at Cornerstone 17 if you do well as an associate and do well as a 18 principal you're going to get the title of vice 19 president. Is that accurate? 20 MS. SIVASHANKER: Objection to 21 form. 22 A. I mean the reason I'm hesitating, 23 the criteria for promotion to vice president 24 are obviously very specific. At a very broad 25 level I think that is -- it is accurate to say</p>	<p style="text-align: right;">Page 21</p> <p>1 keep -- when you're working for a client that 2 you can bill, I assume that you keep time 3 records, right? 4 MS. SIVASHANKER: Objection to 5 form. 6 A. That's correct. 7 Q. When you're doing work that is 8 non-billable, do you keep time records? 9 A. Not with the specificity of 10 tagging it to a particular case because there 11 is no invoice, there is no need to track it in 12 that particular case. I usually sort of bill 13 it in a broad category like contribution to the 14 office or contribution to the firm. 15 Q. Would you have any documentation 16 as to the number of hours you have spent on 17 this matter? 18 A. I do not separately. 19 Q. Do you have an estimate of the 20 number of hours that you have spent on this 21 matter, you personally? 22 A. Yes, I do. 23 Q. How many is that? 24 A. Again, this is an estimate, but I 25 would say 60 to 70 hours personally.</p>

6 (Pages 18 to 21)

<p style="text-align: right;">Page 22</p> <p>1 Q. How did you first hear about this 2 case? 3 A. So I first heard of this case when 4 a colleague of mine, an analyst actually in the 5 New York office brought a couple of complaints 6 to my attention. He was interested in Cornerstone 7 sort of working on pro bono cases and he 8 brought these two complaints to my attention 9 and with the suggestion that these complaints 10 struck him as cases that might involve data and 11 analysis of data in a way that we are 12 experienced at. 13 Q. Who is this colleague? 14 A. It was one of the analysts in the 15 New York office. I'm pretty sure it was Ethan 16 Lowens who was the analyst that brought these 17 two complaints to my attention. This was 18 sometime last year. 19 Q. That was my next question, when 20 was this? 21 A. Sometime last fall. In 2017 fall. 22 Q. You said two complaints, please be 23 more specific. 24 A. One of the complaints was the 25 complaint in this case. And the other complaint I</p>	<p style="text-align: right;">Page 24</p> <p>1 that the expectation and there are obviously 2 exceptions to this that they work for about 3 three years before going back to graduate 4 school. 5 Q. So Mr. Lowens brought you the 6 complaint in this matter; is that correct? 7 A. It was one of the two complaints 8 that he brought to my attention. 9 Q. Who made the decision here at 10 Cornerstone to work on the matter, this matter? 11 MS. SIVASHANKER: Objection to 12 form. 13 A. In part I did. 14 Q. Who else? 15 A. I'm trying to think, there is a 16 process by which case intake needs to be 17 improved and I'm trying to think whether in 18 this case the office head has to sign off or 19 some other committee has to sign off. But I 20 initiated the process of working on this case 21 but there is probably some other administrative 22 step that we needed to undertake before we 23 actually started working on this. 24 At a minimum I think we would 25 have had to run a conflicts check and things of</p>
<p style="text-align: right;">Page 23</p> <p>1 actually don't remember the details of what 2 that case was even about. 3 Q. Is Cornerstone doing the other -- 4 doing the matter other than this one pro bono 5 or do you know? 6 A. I don't believe we are. 7 Q. What did you say that Mr. Ethan 8 who? 9 A. Lowens. L-o-w-e-n-s. 10 Q. And you say Mr. Lowens is an 11 analyst, what is that? 12 A. So what I just described to you a 13 few minutes back was the career track of people 14 who are on a, quote unquote, permanent track. 15 In addition we have staff who we call analysts 16 and these are staff that join us out of 17 undergraduate programs. 18 So they come straight out of 19 undergraduate programs and work at Cornerstone 20 and we call them analysts. They typically stay 21 for a duration of about three years after which 22 they head off to graduate programs in 23 economics, some go to law school, some go to 24 Ph.D. programs in statistics. But they are 25 usually -- they are nonpermanent in the sense</p>	<p style="text-align: right;">Page 25</p> <p>1 that. So I think there is some administrative 2 steps that had to be taken before we actually 3 could start working on this case. 4 Q. Has Cornerstone or -- well, first 5 you, have you ever worked before on a case 6 where the ACLU was involved? 7 MS. SIVASHANKER: Objection to 8 form. 9 A. I personally cannot recall 10 anything that I have done personally. I cannot 11 speak broadly about Cornerstone whether we have 12 been involved in cases in which the ACLU has 13 been involved. 14 Q. Is one of the reasons that 15 Cornerstone decided to engage on this case in 16 order -- as a client development endeavor with 17 regard to Simpson Thacher? 18 MS. SIVASHANKER: Objection to 19 form. 20 A. No, I would not characterize it 21 that way. 22 Q. How would you characterize it? 23 A. As I said, all of us are expected 24 to engage in various activities that build the 25 firm. And pro bono activities fall in the set</p>

7 (Pages 22 to 25)

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<p>1 of, a broader set of activities that we think 2 builds the firm and is good for the firm in a 3 variety of ways. Part of which is external and 4 part of which is internal in the sense that 5 working on these cases gives the analysts an 6 opportunity to develop their skills and working 7 with data sets and things of that nature. 8 So I think it's part of a broader 9 set of, as I said, set of things that we are 10 just expected to do. 11 Q. Why did you recommend to 12 Cornerstone or whatever part you played in the 13 decision, why did you want to take this case? 14 MS. SIVASHANKER: Objection, the 15 only thing that I would caution, if any of 16 that relates to discussions with counsel, 17 please don't assert it during the 18 deposition. 19 MR. ROSS: Are you asserting 20 privilege as to him? 21 MS. SIVASHANKER: No no, I'm just 22 cautioning him that if you're asking in 23 term of the question if some of the source 24 of the information is a result of privilege 25 discussion he should note that.</p>	<p>1 obvious that we would be able to actually do 2 anything meaningful. 3 But when I read a complaint 4 like this it occurred to me, okay, this is the 5 kind of case in which it is possible that it 6 could generate a lot of interesting data sets 7 and therefore the kinds of things that we like 8 to work on and like to think that we are good 9 at and those are the kind of evaluations that 10 go into trying to volunteer Cornerstone's 11 services on a pro bono basis on cases. 12 Q. Who made the decision at 13 Cornerstone that you would work on this case? 14 MS. SIVASHANKER: Objection to 15 form. 16 A. I did. 17 Q. Who made the decision at 18 Cornerstone that Mr. Brian Ricchetti would work 19 on this case? 20 MS. SIVASHANKER: Objection to 21 form. 22 A. I assume Brian did. 23 Q. Did the case initially come to you 24 or did it -- the analyst brought it to you or 25 was it taken to anybody else like Mr. Ricchetti?</p>
Page 27	Page 29
<p>1 MR. ROSS: You're not asserting 2 privilege as to -- 3 MS. SIVASHANKER: No no, he can 4 answer. I'm letting him know if any of it 5 is as a result of privilege discussions to 6 caution him on that. 7 A. When I first read the complaint, 8 the evaluation that I made was is this a good 9 fit with Cornerstone. Is this case -- would 10 this be a good pro bono case for Cornerstone. 11 And that evaluation admittedly is made with 12 imprecise information at the time because all 13 you have is the complaint. But you read the 14 complaint and the evaluation I have to make is, 15 is this the kind of case that is likely to be a 16 good fit with our skills. And our skills have 17 to do with data, economics, statistics and 18 things of that nature. 19 So if there is a case that I read 20 the complaint and sort of say, look, it is 21 highly unlikely that this case is going to 22 involve data or data sets or any interesting 23 economic questions, that would not be a good 24 fit because people would not be interested in 25 working on that. It would not -- it is not</p>	<p>1 MS. SIVASHANKER: Objection to 2 form. 3 A. I don't remember. I don't know 4 exactly how, you know, the specifics of Brian's 5 retention and how he started working on it and 6 who exactly he spoke to initially and so forth. 7 Q. If you had not wanted to work on 8 this case, did you have the authority to say, 9 I'm not going to work on this case? 10 MS. SIVASHANKER: Objection to 11 form. 12 A. Yes. 13 Q. Have you ever published anything 14 concerning the arrest rates of blacks versus 15 whites? 16 MS. SIVASHANKER: Objection to 17 form. 18 A. I have not. 19 Q. Have you ever published anything 20 concerning racial profiling in law enforcement? 21 MS. SIVASHANKER: Objection to 22 form. 23 A. I have not. 24 Q. Have you ever worked on a racial 25 discrimination case where there are allegations</p>

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<p>1 of racial discrimination before this one?</p> <p>2 MS. SIVASHANKER: Objection to</p> <p>3 form.</p> <p>4 A. I don't believe so.</p> <p>5 Q. Who is the sheriff of Madison</p> <p>6 County, Mississippi, do you know?</p> <p>7 A. I believe it is gentleman by the</p> <p>8 name of Tucker. I believe that is the last</p> <p>9 name.</p> <p>10 Q. Do you know or are you guessing?</p> <p>11 MS. SIVASHANKER: Objection to</p> <p>12 form.</p> <p>13 A. I'm not guessing. I'm relying on</p> <p>14 less than perfect memory.</p> <p>15 Q. What is his background, do you</p> <p>16 know?</p> <p>17 MS. SIVASHANKER: Objection to</p> <p>18 form.</p> <p>19 A. I do not.</p> <p>20 Q. Do you know who the chief deputy</p> <p>21 of the Sheriff's Department of Madison County</p> <p>22 is?</p> <p>23 A. I do not.</p> <p>24 Q. Have you ever spoken to anybody at</p> <p>25 the Madison County Sheriff's Department?</p>	<p>1 limits of their criminal jurisdiction, right?</p> <p>2 MS. SIVASHANKER: Objection to</p> <p>3 form.</p> <p>4 Q. The Rankin County Justice Court.</p> <p>5 A. I'm sorry, can you repeat that</p> <p>6 question?</p> <p>7 Q. You have no knowledge of the</p> <p>8 extent of their criminal jurisdiction, do you?</p> <p>9 MS. SIVASHANKER: Objection to</p> <p>10 form.</p> <p>11 A. I couldn't answer that question,</p> <p>12 no, I don't.</p> <p>13 Q. Have you reviewed any depositions</p> <p>14 in this case?</p> <p>15 A. No, I have not.</p> <p>16 Q. Have you ever been to Mississippi?</p> <p>17 A. No, sir, I have not.</p> <p>18 Q. So that means you would not have</p> <p>19 gone to Madison County, Mississippi, right?</p> <p>20 A. That's correct, I have not.</p> <p>21 Q. Are there any municipalities,</p> <p>22 incorporated municipalities in Madison County,</p> <p>23 Mississippi, do you know?</p> <p>24 MS. SIVASHANKER: Objection to</p> <p>25 form.</p>
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<p>1 A. I have not.</p> <p>2 Q. Have you spoken to anybody at the</p> <p>3 Madison County Justice Court?</p> <p>4 MS. SIVASHANKER: Objection to</p> <p>5 form.</p> <p>6 A. I have not.</p> <p>7 Q. Have you spoken to anybody at the</p> <p>8 Madison County Court?</p> <p>9 A. I have not.</p> <p>10 Q. Have you spoken to anybody at the</p> <p>11 Madison County Circuit Court?</p> <p>12 MS. SIVASHANKER: Objection to</p> <p>13 form.</p> <p>14 A. I have not.</p> <p>15 Q. Do you know what type of cases,</p> <p>16 criminal cases the Madison County Justice Court</p> <p>17 handles?</p> <p>18 MS. SIVASHANKER: Objection to</p> <p>19 form.</p> <p>20 A. No, not beyond what I have seen in</p> <p>21 the data. I have looked at data in this particular case</p> <p>22 and based on the data I have some knowledge of</p> <p>23 why certain arrests were made and beyond that,</p> <p>24 I don't have any firsthand knowledge.</p> <p>25 Q. So you have no knowledge of the</p>	<p>1 A. I believe there are, but I'm not</p> <p>2 sure that I could tell you exactly all the specifics, but</p> <p>3 I believe there are.</p> <p>4 Q. Can you name any of them?</p> <p>5 A. I think Canton is probably one of</p> <p>6 them. Flora is one of them. Madison is one of</p> <p>7 them. Jackson possibly. Those are the four</p> <p>8 that come to mind.</p> <p>9 Q. You're talking about Jackson,</p> <p>10 Mississippi, right?</p> <p>11 A. That's correct.</p> <p>12 Q. What's the population of Canton,</p> <p>13 do you know?</p> <p>14 MS. SIVASHANKER: Objection to</p> <p>15 form.</p> <p>16 A. I don't know offhand.</p> <p>17 Q. What is the black/white breakout</p> <p>18 of the population of Canton, do you have any</p> <p>19 idea?</p> <p>20 MS. SIVASHANKER: Objection to</p> <p>21 form. If you have a document you can show</p> <p>22 him that my refresh.</p> <p>23 MR. ROSS: I'm asking whether he</p> <p>24 knows.</p> <p>25 A. I don't know that off the top my</p>

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<p style="text-align: right;">Page 34</p> <p>1 head.</p> <p>2 Q. What is the population of Flora,</p> <p>3 do you know?</p> <p>4 MS. SIVASHANKER: Objection to</p> <p>5 form.</p> <p>6 A. Not off the top my head.</p> <p>7 Q. You don't know the black/white</p> <p>8 ratio of the residents of Flora?</p> <p>9 MS. SIVASHANKER: Objection to</p> <p>10 form.</p> <p>11 A. I don't know that off the top of</p> <p>12 my head, but that is something that I could</p> <p>13 look into, but I don't know that.</p> <p>14 Q. What is the population of Madison?</p> <p>15 MS. SIVASHANKER: Objection to</p> <p>16 form.</p> <p>17 A. Same answer, I don't know that off</p> <p>18 top of my head.</p> <p>19 Q. You don't know the black/white</p> <p>20 breakdown of the population of Madison, do you?</p> <p>21 MS. SIVASHANKER: Objection to</p> <p>22 form.</p> <p>23 A. Not off the top of my head.</p> <p>24 Q. Have you ever heard the term law</p> <p>25 enforcement agency and primary jurisdiction?</p>	<p style="text-align: right;">Page 36</p> <p>1 MS. SIVASHANKER: Objection to</p> <p>2 form.</p> <p>3 A. No. Could you read off my answer?</p> <p>4 I don't believe I said I was guessing. I thought I said</p> <p>5 based on my memory that is what I remember.</p> <p>6 Q. Do you know sitting here today is</p> <p>7 what I'm asking.</p> <p>8 MS. SIVASHANKER: Objection to</p> <p>9 form. I think he answered your question.</p> <p>10 A. I believe I have answered the</p> <p>11 question.</p> <p>12 Q. Okay, how many sworn officers are</p> <p>13 in the City of Madison Police Department?</p> <p>14 MS. SIVASHANKER: Objection to</p> <p>15 form.</p> <p>16 A. I don't know that.</p> <p>17 Q. How about in the City of Canton</p> <p>18 Police Department?</p> <p>19 MS. SIVASHANKER: Objection to</p> <p>20 form.</p> <p>21 A. I don't know that.</p> <p>22 Q. In the City of Flora Police</p> <p>23 Department?</p> <p>24 MS. SIVASHANKER: Objection to</p> <p>25 form.</p>
<p style="text-align: right;">Page 35</p> <p>1 A. I don't believe of I have an</p> <p>2 understanding of that term.</p> <p>3 Q. Do you know which law enforcement</p> <p>4 agency exercises primary jurisdiction in the</p> <p>5 City of Madison?</p> <p>6 MS. SIVASHANKER: Objection to</p> <p>7 form.</p> <p>8 A. My general understanding is that</p> <p>9 there are multiple entities that are relevant.</p> <p>10 The sheriff's department being one and possibly</p> <p>11 other ones, but I could not tell you who has</p> <p>12 primary jurisdiction. My understanding is that</p> <p>13 multiple entities have responsibility for, I</p> <p>14 believe you said Madison.</p> <p>15 Q. How many sworn officers are there</p> <p>16 in the Madison County Sheriff's Department say</p> <p>17 as of 2017 when you got retained for this case?</p> <p>18 MS. SIVASHANKER: Objection to</p> <p>19 form.</p> <p>20 A. I recall seeing that number</p> <p>21 somewhere, I don't remember. My recollection</p> <p>22 is something on the order of 75, but I don't</p> <p>23 remember that. This is just purely what I</p> <p>24 remember from memory.</p> <p>25 Q. You're guessing?</p>	<p style="text-align: right;">Page 37</p> <p>1 A. I don't know that.</p> <p>2 Q. Now, you're at Cornerstone, the</p> <p>3 work that you do for clients on a billable</p> <p>4 status, is all of that litigation related?</p> <p>5 MS. SIVASHANKER: Objection to</p> <p>6 form. Are you asking about Cornerstone as</p> <p>7 a whole or his work?</p> <p>8 MR. ROSS: His work.</p> <p>9 A. No.</p> <p>10 Q. What percent is litigation</p> <p>11 related?</p> <p>12 A. Again it is mine rather than</p> <p>13 Cornerstone's overall?</p> <p>14 Q. Yes.</p> <p>15 A. It changes over time, I would say</p> <p>16 about 75 percent.</p> <p>17 Q. Is that about the same for</p> <p>18 Cornerstone overall or do you know?</p> <p>19 MS. SIVASHANKER: Objection to</p> <p>20 form.</p> <p>21 A. I don't know for sure for</p> <p>22 Cornerstone overall.</p> <p>23 Q. Do you know generally?</p> <p>24 MS. SIVASHANKER: Objection to</p> <p>25 form.</p>

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<p>1 A. Yes, I do.</p> <p>2 Q. Is it about the same overall for</p> <p>3 Cornerstone?</p> <p>4 MS. SIVASHANKER: Objection to</p> <p>5 form.</p> <p>6 A. I would say the majority is</p> <p>7 litigation related.</p> <p>8 Q. Now Cornerstone has several</p> <p>9 offices. I looked at your website, London, Los</p> <p>10 Angeles, New York, San Francisco, Silicone</p> <p>11 Valley and Washington. Is that all of your</p> <p>12 offices?</p> <p>13 A. Did you say Chicago in that?</p> <p>14 Q. No, I did not. So Chicago,</p> <p>15 Washington, Silicone Valley, San Francisco, New</p> <p>16 York, Los Angeles and London, is that all of</p> <p>17 your offices?</p> <p>18 A. That's correct.</p> <p>19 Q. Have you always worked in the New</p> <p>20 York office?</p> <p>21 A. I have not.</p> <p>22 Q. Where else did you work?</p> <p>23 A. I used to work in the Boston</p> <p>24 office -- well actually when I started it was</p> <p>25 the Cambridge office from Cambridge we moved</p>	<p>1 form.</p> <p>2 Q. Do you know the name of the road</p> <p>3 that is the border?</p> <p>4 MS. SIVASHANKER: Objection to</p> <p>5 form.</p> <p>6 A. As I said, I couldn't tell you</p> <p>7 that from memory.</p> <p>8 Q. Do you have any idea of what the</p> <p>9 major traffic arteries are in Madison County?</p> <p>10 MS. SIVASHANKER: Objection to</p> <p>11 form.</p> <p>12 A. I couldn't tell you that, I don't</p> <p>13 know.</p> <p>14 Q. Do you have any idea where any --</p> <p>15 let me ask, do you have any idea -- are you familiar</p> <p>16 with Lake Harbor Drive?</p> <p>17 MS. SIVASHANKER: Objection to</p> <p>18 form.</p> <p>19 A. Could you repeat the question.</p> <p>20 Q. Are you familiar with -- have you</p> <p>21 ever heard of Lake Harbor Drive?</p> <p>22 MS. SIVASHANKER: Objection to</p> <p>23 form. Is this a drive in Mississippi?</p> <p>24 MR. ROSS: Yes.</p> <p>25 Q. Do you know where Lake Harbor</p>
Page 39	Page 41
<p>1 across the river to Boston and so I worked in</p> <p>2 the Cambridge/Boston offices before moving to</p> <p>3 New York.</p> <p>4 Q. When did you move to New York?</p> <p>5 A. 2012.</p> <p>6 MR. ROSS: Let's go off the record</p> <p>7 please.</p> <p>8 (Recess taken.)</p> <p>9 BY MR. ROSS:</p> <p>10 Q. Dr. Guha, do you know what County</p> <p>11 borders Madison County on the south?</p> <p>12 MS. SIVASHANKER: Objection to</p> <p>13 form.</p> <p>14 A. I couldn't tell you from memory.</p> <p>15 I can -- if I looked at a map it would come back to me,</p> <p>16 but I couldn't tell you from memory.</p> <p>17 Q. Have you looked at a map in the</p> <p>18 course of your work on this matter?</p> <p>19 MS. SIVASHANKER: Objection to</p> <p>20 form.</p> <p>21 A. I believe I have.</p> <p>22 Q. Do you know what the border is</p> <p>23 between Madison County and the county to the</p> <p>24 south?</p> <p>25 MS. SIVASHANKER: Objection to</p>	<p>1 Drive is in Madison County?</p> <p>2 A. I couldn't tell you that off</p> <p>3 memory.</p> <p>4 Q. Or Hoy Road is in Madison County?</p> <p>5 A. Same answer, I couldn't tell you</p> <p>6 that off memory.</p> <p>7 Q. Or Old Canton Road is in Madison</p> <p>8 County?</p> <p>9 A. I couldn't tell you that off</p> <p>10 memory.</p> <p>11 Q. Or Highway 51 is in Madison</p> <p>12 County?</p> <p>13 A. Again, I think the same answer. I</p> <p>14 believe I looked at the map and I might have</p> <p>15 seen these roads, but I couldn't tell you any</p> <p>16 of these from memory.</p> <p>17 Q. Sitting here today you can't tell</p> <p>18 me, right?</p> <p>19 MS. SIVASHANKER: Objection to</p> <p>20 form.</p> <p>21 A. That's correct, off memory I can't</p> <p>22 tell you.</p> <p>23 Q. Highway 55 in Madison County?</p> <p>24 MS. SIVASHANKER: Objection to</p> <p>25 form.</p>

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<p style="text-align: right;">Page 42</p> <p>1 A. Not off memory. Again, if I look 2 at a map and I'm sure I could refresh my memory 3 but again sitting here off my memory I couldn't 4 tell you that.</p> <p>5 Q. Do you know the traffic counts on 6 any roads in Madison County?</p> <p>7 MS. SIVASHANKER: Objection to 8 form.</p> <p>9 A. I do not.</p> <p>10 Q. Do you know what portions of 11 Madison County have bars that stay open after 12 midnight?</p> <p>13 MS. SIVASHANKER: Objection to 14 form. What do you mean by portions?</p> <p>15 Q. Geographic locations.</p> <p>16 MS. SIVASHANKER: Objection to 17 form.</p> <p>18 A. I do not know that.</p> <p>19 Q. Do you consider yourself an expert 20 in law enforcement methods?</p> <p>21 MS. SIVASHANKER: Objection to 22 form.</p> <p>23 A. As you can see from my CV I'm not 24 a lawyer, so I mean if you're asking me if I have legal 25 expertise in those fields, I certainly don't.</p>	<p style="text-align: right;">Page 44</p> <p>1 A. So in my report I believe I have 2 listed out the documents that I read. I'm not 3 sure that I could exactly tell you which ones, 4 but I believe in my declaration I listed those 5 out.</p> <p>6 Q. Can you tell me any of them?</p> <p>7 MS. SIVASHANKER: Objection to 8 form.</p> <p>9 A. The complaint was one of them. 10 Defendants' response to interrogatories might 11 have been another. There were a few others.</p> <p>12 Q. If you reviewed a document it 13 would be listed in your report, is that 14 accurate?</p> <p>15 MS. SIVASHANKER: Objection to 16 form.</p> <p>17 A. In the declaration. I believe 18 what I filed is a declaration. But, yes, I think that's 19 correct, it would be listed.</p> <p>20 Q. If a document is not listed in 21 your declaration then you would not have 22 reviewed it, right?</p> <p>23 MS. SIVASHANKER: Objection to 24 form.</p> <p>25 A. Specific to this case, I think</p>
<p style="text-align: right;">Page 43</p> <p>1 Q. I'm more specific. Do you 2 consider yourself an expert in law enforcement 3 methods or police methods? Do you understand 4 my question?</p> <p>5 A. I do.</p> <p>6 Q. Do you consider yourself an expert 7 in those areas?</p> <p>8 MS. SIVASHANKER: Objection to 9 form.</p> <p>10 A. I do not.</p> <p>11 Q. Do you consider yourself an expert 12 on law enforcement practices?</p> <p>13 MS. SIVASHANKER: Objection to 14 form.</p> <p>15 A. No, sir, I do not.</p> <p>16 Q. Did you review any of the policies 17 or procedures of the Madison County Sheriff's 18 Department in this case?</p> <p>19 A. I don't believe so. Unless they 20 were cited in some way in the complaint or some 21 of the other documents that I read.</p> <p>22 Q. Well, you mentioned the complaint. 23 What other documents did you read?</p> <p>24 MS. SIVASHANKER: Objection to 25 form.</p>	<p style="text-align: right;">Page 45</p> <p>1 that's correct.</p> <p>2 Q. Well, is there --</p> <p>3 A. Actually, can I -- so let me back 4 up a little. I think there are things that I 5 have looked at more generally. For example, at 6 some point I have definitely looked at a map of 7 the county and that's not -- I'm sure --</p> <p>8 MS. SIVASHANKER: Just to pause 9 here. This should be focused on his 10 declaration in the case. If you reviewed 11 other documents in connection with work 12 product or other tasks that don't relate to 13 his declaration we shouldn't be getting 14 into that. That is not the scope of this 15 deposition today.</p> <p>16 MR. ROSS: I will determine the 17 scope and he just said he reviewed other 18 things, I want to know -- with regard to 19 this case, I'm asking what those are.</p> <p>20 A. Yes, and so as I said, I have 21 looked at a map or for example if I was checking 22 some analysis, like if I wanted to look at some 23 help regarding Excel or something, so there are 24 some general things like that that I may have 25 looked at.</p>

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<p>1 Q. Everything that you relied upon as 2 a basis for your declaration is listed in the 3 declaration; is that correct? 4 MS. SIVASHANKER: Objection to 5 form. Also you can refer to your declaration 6 if you're going to ask questions about it. 7 MR. ROSS: For the record his 8 declaration is Exhibit 3. 9 A. So, it is in an appendix to this. 10 The answer to your question is yes. 11 MS. SIVASHANKER: I think it may be 12 Appendix A. 13 A. Yes, this is the one that I'm 14 looking for. Appendix A. Yes, that's correct. 15 Q. I believe you said that you were 16 first contacted about this case in the fall of 17 2017; is that correct? 18 A. Yes, that's correct. 19 Q. When did you start doing 20 substantive work on this case? 21 MS. SIVASHANKER: Objection to 22 form. Do you mean substantive work with 23 respect to his declaration in this case? 24 MR. ROSS: Yes. 25 A. Around Thanksgiving of 2017.</p>	<p>1 MR. ROSS: I'm asking who he is 2 refer to when he says in his declaration 3 that he was assisted in this matter by 4 staff of Cornerstone Research who worked 5 under his direction. 6 A. For the declaration there was an 7 associate and three or four analysts that helped me 8 sort through the data. 9 Q. Who was the associate? 10 A. A person by the name of Stephanie 11 Chapman. She is now Stephanie Chapman 12 Weishaar. W-e-i-s-h-a-a-r. 13 Q. For purposes of this deposition 14 I'm going to call her Stephanie Chapman, okay. 15 Where does Miss Chapman work? 16 A. She works in the Washington, D.C. 17 office of Cornerstone Research. 18 Q. What is her background? 19 A. She has a Ph.D. in economics from 20 Northwestern University. 21 Q. Do you know how many hours she 22 spent on this project? 23 MS. SIVASHANKER: Objection to 24 form. 25 A. I do not.</p>
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<p>1 Q. Tell me generally, I mean when I 2 look at your declaration and we are going to 3 talk about this in detail as the day goes on, 4 there is arrest data and citation data and 5 there is a summary of selected categories of a 6 subset of incident reports. Is that a fair 7 characterization? 8 MS. SIVASHANKER: Objection to 9 form. 10 A. That is correct. If you look at 11 the declaration it's laid out in paragraph 3, 12 but those are the three data summaries, I 13 believe that's correct. 14 Q. Let's talk about the arrests data 15 and before we get into the details of it. 16 You mentioned in your report "I 17 have been assisted in this matter" -- I'm 18 looking at paragraph 2 of your declaration 19 which is Exhibit 3. "I have been assisted in 20 this matter by staff at Cornerstone Research 21 who worked under my direction." What staff 22 worked under your direction? 23 MS. SIVASHANKER: Objection to 24 form. In connection with preparation of 25 this declaration?</p>	<p>1 Q. Does she have any law enforcement 2 background that you know of? 3 MS. SIVASHANKER: Objection to 4 form. 5 A. I don't. I don't know. Aside 6 from her -- where her Ph.D. is from, I don't 7 know. 8 Q. You mentioned three to four 9 analysts, who were the analysts? 10 A. I'm going to apologize because I 11 could get the last names wrong. Mario Monti. 12 M-o-n-t-i. Daniel his last name is Perkes. 13 P-e-r-k-e-s. Jared last name I think is Nolan. 14 N-o-l-a-n. Tyler, last name I believe is Hays. 15 H-a-y-s. 16 Q. What did Miss Chapman do on 17 this project? 18 MS. SIVASHANKER: Objection to 19 form. 20 A. It's the way that we would work on 21 any other case. I mean these data sets are 22 voluminous and Stephanie would help me, you 23 know, with the data and the programs that were 24 written to clean the data. She would sort of 25 make sure that the programs had been written</p>

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<p style="text-align: right;">Page 50</p> <p>1 correctly and make sure that quality checks are 2 in place. Assistance with summarizing the 3 data, assistance with quality checking the 4 data. Things of that nature. 5 Q. The programs that Cornerstone 6 used for the arrest data, did you write that -- 7 did Cornerstone write that itself or was that 8 an off the shelf program? 9 MS. SIVASHANKER: Objection to 10 form. 11 A. Off shelf programs. 12 Q. Which one did you use for the 13 arrest data? 14 A. For the arrest data it's a 15 combination of two programs. One is SAS and 16 another is Excel. 17 Q. What about for the citation data? 18 MS. SIVASHANKER: Objection to 19 form. 20 A. The same two, SAS and Excel. 21 Q. And for the third category, the 22 selected subsets? 23 MS. SIVASHANKER: Objection to 24 form. 25 A. Are you asking about the software?</p>	<p style="text-align: right;">Page 52</p> <p>1 paragraph 29 of the declaration, about half way 2 in the paragraph it says, "Next, keyword 3 searches of the processed files were used in 4 order to identify incident reports related to 5 each topic of interest. The details of which 6 are described below." 7 The process through which pieces 8 of text are identified in an incident report, 9 that process was conducted using R. 10 Q. Did you actually review any -- did 11 you personally review any incident reports? 12 A. I did. 13 MS. SIVASHANKER: Objection to 14 form. 15 Q. You did? 16 A. I did. 17 Q. How many? 18 A. I think the total number of 19 incident reports that we had was close to 20 50,000. It is just a lot of PDF files. I opened a 21 whole bunch of them to get a sense of what 22 these things actually looked like. The raw PDF 23 files. I couldn't give you an exact number, 24 but I clicked and open a lot of those files to 25 see what those things look like.</p>
<p style="text-align: right;">Page 51</p> <p>1 Q. Yes. 2 A. So in addition to SAS and Excel, 3 there is another piece of software which is 4 called R. 5 Q. What does the software called the 6 letter R do? 7 A. It is actually what you would 8 refer to as open source software in the sense 9 that it is actually free and it's available to 10 anybody on the Internet. And so therefore what 11 that means it is ever evolving because people 12 are getting it free but people are also 13 contributing to it and you can do a variety of 14 things with R. 15 In this particular case R was 16 used for one specific purpose, but people use R 17 for many different things and I couldn't tell 18 you what exactly the full scope of things are. 19 Q. What purpose was R used for in 20 this case? 21 MS. SIVASHANKER: Objection to 22 form. 23 A. Again, if we just to make sure 24 that I'm giving you an accurate description. I 25 have described this in -- so if you go to</p>	<p style="text-align: right;">Page 53</p> <p>1 Q. Did you actually review any 2 citations? 3 MS. SIVASHANKER: Objection to 4 form. 5 A. That data came in Excel format and 6 I looked at the raw Excel spreadsheet. 7 Q. Have you looked at any underlying 8 citations? 9 MS. SIVASHANKER: When you say 10 citations are you talking about a certain 11 document. 12 MR. ROSS: Let's back up. 13 Q. I assume for the Excel spreadsheet 14 relating to citations there are to be underlying 15 citations that you took the data from and put 16 it into the spreadsheet, right? 17 MS. SIVASHANKER: Objection to 18 form. 19 A. I want to make sure that I do this -- 20 give you an accurate answer. 21 As I say in paragraph 17, "It is 22 my understanding that the citations data 23 represent all citations issued to individuals 24 in Madison County for the period" etc. And I'm 25 trying to remember exactly who produced the</p>

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<p>1 data, but as I say, it is my understanding that</p> <p>2 that is an accurate representation of all the</p> <p>3 citations for this particular time period.</p> <p>4 Q. My question is, did you review any</p> <p>5 actual copies of citations?</p> <p>6 MS. SIVASHANKER: Objection to</p> <p>7 form.</p> <p>8 A. Well, I guess the reason I'm</p> <p>9 having difficulty with that question, if you're</p> <p>10 making a distinction between the piece of paper</p> <p>11 and the row of data, then I haven't seen the</p> <p>12 piece of paper. But to the extent that piece</p> <p>13 of paper and row of data are identical, yes, I</p> <p>14 have because I looked at the row of data.</p> <p>15 Q. With the citations, you're talking</p> <p>16 about the piece of paper and then the line in the</p> <p>17 Excel spreadsheet. Who took the information</p> <p>18 from the piece of paper and put it in the line</p> <p>19 in the Excel spreadsheet?</p> <p>20 MS. SIVASHANKER: Objection to</p> <p>21 form.</p> <p>22 A. That's where I'm -- and I know</p> <p>23 there is -- it came from -- you know it came</p> <p>24 from -- I'm trying to remember exactly. It</p> <p>25 came from the Madison County -- I have looked</p>	<p>1 A. No, I don't believe there was</p> <p>2 anything additional that I did. I mean this --</p> <p>3 these data as I point out in this paragraph in</p> <p>4 this footnote were represented to me as being</p> <p>5 the list of citations in that particular time</p> <p>6 period.</p> <p>7 Q. That representation was from</p> <p>8 Simpson Thacher, right?</p> <p>9 A. That's correct.</p> <p>10 Q. I believe you have already said</p> <p>11 you did not talk to anybody at the Madison</p> <p>12 County Justice Court office, did you?</p> <p>13 MS. SIVASHANKER: Objection to</p> <p>14 form.</p> <p>15 A. No, I did not.</p> <p>16 Q. You didn't make any inquiry how</p> <p>17 that data was collected, did you?</p> <p>18 MS. SIVASHANKER: Objection to</p> <p>19 form.</p> <p>20 A. No, I did not.</p> <p>21 Q. I may have asked you this. Miss</p> <p>22 Chapman, do you know how many hours she put in</p> <p>23 on this project?</p> <p>24 MS. SIVASHANKER: Objection to</p> <p>25 form. I think that has been asked.</p>
Page 55	Page 57
<p>1 at that, I think it came from one of the</p> <p>2 relevant courts in Madison County and I can't</p> <p>3 remember the exact source. But it came -- I</p> <p>4 understand it came from a court in Madison</p> <p>5 County, but I don't remember.</p> <p>6 MS. SIVASHANKER: To help out to</p> <p>7 make this more efficient, if you want to</p> <p>8 look at paragraph 3 I think that might help</p> <p>9 you. I think that lays out the sourcing</p> <p>10 cells.</p> <p>11 A. That is the footnote I was looking</p> <p>12 at.</p> <p>13 MR. ROSS: Counsel, it is his</p> <p>14 deposition not yours, please.</p> <p>15 A. That is the footnote that I was</p> <p>16 look for, exactly. Footnote 3 "I have been</p> <p>17 informed by counsel the citation data was</p> <p>18 produce by the Madison County Justice Court."</p> <p>19 I'm sorry, I got the name of the court wrong.</p> <p>20 Q. Did you do any inquiry to</p> <p>21 determine if that citation data received</p> <p>22 through the public records request was</p> <p>23 accurate?</p> <p>24 MS. SIVASHANKER: Objection to</p> <p>25 form.</p>	<p>1 A. I do not.</p> <p>2 Q. Do you know how many hours</p> <p>3 Mr. Monti put in?</p> <p>4 MS. SIVASHANKER: Objection to</p> <p>5 form.</p> <p>6 A. I do not.</p> <p>7 Q. Mr. David Perkes?</p> <p>8 A. Daniel, I believe.</p> <p>9 Q. Daniel.</p> <p>10 A. I do not.</p> <p>11 Q. Jared Nolan?</p> <p>12 A. No.</p> <p>13 Q. Tyler Hays?</p> <p>14 MS. SIVASHANKER: Objection to</p> <p>15 form.</p> <p>16 A. I do not.</p> <p>17 Q. Do you know who Nolan Russell is?</p> <p>18 A. Yes. Did I mention Nolan's name.</p> <p>19 Q. You did not?</p> <p>20 A. Did I say Jared Nolan?</p> <p>21 Q. Yes.</p> <p>22 A. I apologize, I think it is Nolan</p> <p>23 that worked not Jared. I'm sorry.</p> <p>24 Q. Tell me what Miss Chapman and</p> <p>25 these analysts did as contrasted to what you</p>

15 (Pages 54 to 57)

<p style="text-align: right;">Page 58</p> <p>1 did?</p> <p>2 MS. SIVASHANKER: Objection to</p> <p>3 form.</p> <p>4 A. It is, again, the way I work with</p> <p>5 the associates and analysts on this case is</p> <p>6 identical to how I would work on any other</p> <p>7 case. In the sense that if you look at, for</p> <p>8 example, data summary one, there is arrest data</p> <p>9 and which comes in a spreadsheet. So the</p> <p>10 starting point is I look at the spreadsheet and</p> <p>11 I try to sort of make sense, does the</p> <p>12 spreadsheet -- does the data look right.</p> <p>13 I mean I just look at the</p> <p>14 spreadsheet and then I would, you know, talk to</p> <p>15 Stephanie and sort of say, okay, what is the</p> <p>16 data summary that I'm being asked to create.</p> <p>17 And we agree on sort of what the task is and</p> <p>18 then the analysts are the ones that actually</p> <p>19 then take the data and then use either SAS or</p> <p>20 Excel, whatever is appropriate and generate the</p> <p>21 output.</p> <p>22 The reason that we have multiple</p> <p>23 analysts working on it, it is very standard for</p> <p>24 us -- it's a requirement as a matter of fact</p> <p>25 for somebody to independently check the work of</p>	<p style="text-align: right;">Page 60</p> <p>1 you.</p> <p>2 A. Yes, absolutely did.</p> <p>3 Q. Did you talk to her in Washington</p> <p>4 about Exhibit 1?</p> <p>5 MS. SIVASHANKER: Objection, I</p> <p>6 think he answered that.</p> <p>7 A. I talked to Stephanie about the</p> <p>8 case in Washington, D.C. and I would characterize</p> <p>9 that as substantive work.</p> <p>10 Q. Did you talk to her about</p> <p>11 Exhibit 1?</p> <p>12 A. I don't remember that.</p> <p>13 Q. Do you remember anything specific</p> <p>14 that you talked to Stephanie in Washington</p> <p>15 about?</p> <p>16 MS. SIVASHANKER: Objection to</p> <p>17 form.</p> <p>18 A. Yes, about the case.</p> <p>19 Q. Do you remember anything more</p> <p>20 specific than, quote, the case that you talked</p> <p>21 to Stephanie in Washington about?</p> <p>22 MS. SIVASHANKER: Objection to</p> <p>23 form.</p> <p>24 A. I talked to her about arrest data</p> <p>25 and citation data and incident report data, all</p>
<p style="text-align: right;">Page 59</p> <p>1 another one, that is why we have multiple</p> <p>2 people working on it.</p> <p>3 But they would use SAS or Excel</p> <p>4 and come up with the output and we look at it</p> <p>5 and say, you know, does this look right or is</p> <p>6 it something that looks -- have you checked</p> <p>7 this or have you checked that. So that is the</p> <p>8 normal process in which you work on any case</p> <p>9 and that is the way we worked on this case.</p> <p>10 Q. Did you ever go to Washington and</p> <p>11 work on this case with them?</p> <p>12 A. I go to the Washington, D.C.</p> <p>13 office often, I did not go to Washington with</p> <p>14 the specific purpose of working on this case,</p> <p>15 but certainly I was in Washington and I talked</p> <p>16 to Stephanie and other people on the case while</p> <p>17 I was in the Washington office.</p> <p>18 Q. Did you really do any substantive</p> <p>19 work in Washington on this case?</p> <p>20 MS. SIVASHANKER: Objection to</p> <p>21 form.</p> <p>22 A. Yes, I did. I mean if I was in</p> <p>23 the Washington office and I talked to Stephanie</p> <p>24 about look at this particular Exhibit 1 and --</p> <p>25 Q. I'm not saying if. I'm asking did</p>	<p style="text-align: right;">Page 61</p> <p>1 of them.</p> <p>2 MS. SIVASHANKER: Off the record.</p> <p>3 (Discussion off the record.)</p> <p>4 BY MR. ROSS:</p> <p>5 Q. Let's go to your declaration which</p> <p>6 is Exhibit 3. Go to paragraph 3, 3A, please.</p> <p>7 It's talking about the data summary one, which</p> <p>8 is pertaining to arrest data and it says that</p> <p>9 just, you understand that "this data represents</p> <p>10 all individuals represented by the Madison</p> <p>11 County Sheriff's Department and booked into the</p> <p>12 Madison County Detention Center." What data</p> <p>13 are you talking about?</p> <p>14 A. It is the data contained in the</p> <p>15 file that is listed before, the ACLU12TO17.CSV.</p> <p>16 That's the data.</p> <p>17 Q. And this came from bookings at</p> <p>18 the Madison County Detention Center according</p> <p>19 to your declaration paragraph 3A; is that</p> <p>20 correct?</p> <p>21 A. And footnote 2.</p> <p>22 Q. And footnote 2. Do you know if</p> <p>23 other law enforcement agencies when they arrest</p> <p>24 somebody in Madison County detain that person -- that</p> <p>25 person is detained at the Madison County</p>

16 (Pages 58 to 61)

Page 62	Page 64
<p>1 Detention Center?</p> <p>2 MS. SIVASHANKER: Objection to</p> <p>3 form.</p> <p>4 A. I'm not entirely sure about that.</p> <p>5 As I said in footnote 2 it says my understanding is</p> <p>6 that it reflects only arrests made by the</p> <p>7 Madison County Sheriff's Department and not</p> <p>8 those made by other arresting agencies.</p> <p>9 Q. Did you do any analysis or summary</p> <p>10 regarding arrests as to other arresting agencies in</p> <p>11 Madison County, Mississippi?</p> <p>12 MS. SIVASHANKER: Objection to</p> <p>13 form.</p> <p>14 A. I did not.</p> <p>15 Q. So you don't know with regard to</p> <p>16 those other law enforcement agencies what the</p> <p>17 ratio of blacks versus whites being arrested</p> <p>18 is?</p> <p>19 MS. SIVASHANKER: Objection to</p> <p>20 form.</p> <p>21 A. No, sir, I have not done that</p> <p>22 analysis.</p> <p>23 Q. Now, go to paragraph 3B of your</p> <p>24 declaration which is Exhibit 3 and it indicates</p> <p>25 that "The data with regard to citations</p>	<p>1 agencies in Madison County?</p> <p>2 MS. SIVASHANKER: Objection. I'm</p> <p>3 going to object to that on the basis of</p> <p>4 privilege and work product.</p> <p>5 MR. ROSS: Privilege with him?</p> <p>6 MS. SIVASHANKER: Are you asking</p> <p>7 about discussions with Simpson Thacher</p> <p>8 regarding --</p> <p>9 MR. ROSS: Yes, you gave him</p> <p>10 instructions on which categories to look</p> <p>11 at. I don't see that as privileged.</p> <p>12 MS. SIVASHANKER: Can you repeat</p> <p>13 the question again?</p> <p>14 (Requested portion of record read.)</p> <p>15 MS. SIVASHANKER: So now you're</p> <p>16 asking about what we told him not to do. I</p> <p>17 do think that is getting into work product</p> <p>18 and privileged questions. You're asking</p> <p>19 him about what counsel instructed him not</p> <p>20 to do.</p> <p>21 MR. ROSS: I'm not aware of any</p> <p>22 privilege with regard to experts. You're</p> <p>23 not saying he is your client, are you?</p> <p>24 MS. SIVASHANKER: One, to be clear,</p> <p>25 he did not submit a expert report in this</p>
Page 63	Page 65
<p>1 represent all citations issued in Madison</p> <p>2 County for the period January 1st, 2012 to</p> <p>3 December 31st, 2017 and that this data included</p> <p>4 citations issued by the Madison County</p> <p>5 Sheriff's Department as well as by other</p> <p>6 agencies within Madison County."</p> <p>7 Did you do any analysis of the</p> <p>8 citations from other law enforcement agencies</p> <p>9 in Madison County with regard to the breakdown</p> <p>10 of black people versus white people receiving</p> <p>11 citations?</p> <p>12 MS. SIVASHANKER: Objection to</p> <p>13 form.</p> <p>14 A. That was not a calculation that I</p> <p>15 was asked to do, I did not do that.</p> <p>16 Q. Who asked you or who gave you</p> <p>17 instructions on which calculations you were to</p> <p>18 do and not to do?</p> <p>19 MS. SIVASHANKER: Objection to</p> <p>20 form.</p> <p>21 A. Counsel at Simpson Thacher</p> <p>22 instructed me about which calculations to</p> <p>23 perform.</p> <p>24 Q. Did they tell you not to look at</p> <p>25 the citation data for other law enforcement</p>	<p>1 case. And we are representing him in this</p> <p>2 case and he worked in his own capacity on</p> <p>3 this case so I would be asserting work</p> <p>4 product with respect to questions regarding</p> <p>5 discussions he had with counsel about work</p> <p>6 he was not to perform. That clearly</p> <p>7 relates to work product in connection with</p> <p>8 the litigation.</p> <p>9 MR. ROSS: I want to note this, my</p> <p>10 question, we are going to take it up with</p> <p>11 the court.</p> <p>12 If you're telling him what to do and</p> <p>13 what not to do, that is not work product.</p> <p>14 That is influencing his testimony. And I'm</p> <p>15 entitled to know what he did and what he</p> <p>16 didn't do and why. So are you instructing</p> <p>17 him not to answer my question?</p> <p>18 MS. SIVASHANKER: I'm instructing</p> <p>19 him not to answer if you're asking him what</p> <p>20 he was instructed not to do in discussions</p> <p>21 with counsel in connection with this</p> <p>22 action.</p> <p>23 (COUNSEL REQUESTS RULING.)</p> <p>24 Q. Did counsel instruct you not to do</p> <p>25 certain things?</p>

17 (Pages 62 to 65)

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<p>1 MS. SIVASHANKER: Objection, again, 2 that is getting into issues of work product 3 and privilege and I will instruct the 4 witness not to answer. 5 Q. Did counsel want you not to do 6 certain things because it might not want to 7 know the answer? 8 MS. SIVASHANKER: Objection, I 9 object to this on the ground of work 10 product and privilege. 11 Q. You as a Ph.D. person who works 12 with data, do you allow counsel to determine 13 what is relevant with regard to the data or do 14 you make your own independent judgment as to 15 that? 16 MS. SIVASHANKER: Objection to 17 form. 18 A. So, as in this particular instance 19 I have not offered an expert report. So I want 20 to be very clear this is a declaration and my 21 role in this particular case is to perform 22 certain calculations and perform certain 23 summaries of specifically identified data sets. 24 And that is what I have done here. Nothing 25 more, nothing less.</p>	<p>1 as I outline in footnote 4, I mean there are 2 certainly other agencies, for example the 3 Mississippi Highway Patrol, the Madison County 4 Constable, etc. because I haven't done the 5 analysis I don't have a sense for how many 6 observations there are for each of these 7 agencies and whether they would permit the same 8 analysis. That is just simply something that I 9 haven't done. 10 MR. ROSS: Off the record for a 11 moment. 12 (Discussion off the record.) 13 Q. Go over to paragraph 19 of your 14 declaration. We are going to get into this in 15 more detail but it says, "Exhibit 3 shows that 16 72 percent of all citations are issued to black 17 individuals compared to 23 percent of all 18 citations issued to white individuals and 19 5 percent issued to individuals of other 20 races." Do you see where I read that? 21 A. I do. 22 Q. That is referring to citations 23 issued by the Madison County Sheriff's 24 Department; is that correct? 25 A. That's correct.</p>
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<p>1 Q. Do you consider Simpson Thacher 2 your lawyer in this case? Do you consider that 3 you have an attorney-client relationship with 4 them? 5 MS. SIVASHANKER: Objection to 6 form. 7 A. I will answer that question in two 8 parts. First I don't consider Simpson Thacher 9 to be my lawyer. And second I wouldn't be able 10 to tell you what the parameters of attorney-client 11 privilege are. I'm not a lawyer, I don't 12 understand that. 13 Q. That's fair enough. With regard 14 to the citation data, you had available the 15 citation data from other law enforcement 16 agencies in Madison County; is that correct? 17 A. That's correct. 18 Q. And since you had it available, 19 you could have, if you chose, done an analysis 20 of a black/white breakdown of those citations 21 issued by other agencies in Madison County; is 22 that correct? 23 MS. SIVASHANKER: Objection to 24 form. 25 A. I haven't looked at that. I mean</p>	<p>1 Q. You have the data of citations 2 issued in Madison County by other agencies; is 3 that correct? 4 A. I believe that's correct. 5 Q. But you did not do an analysis of 6 what percentage of those citations were issued 7 to black individuals as compared to people of 8 other races, did you? 9 MS. SIVASHANKER: Objection to 10 form. 11 A. That is not a calculation that I 12 did. 13 Q. So, you cannot say that the 72 14 percent figure which you refer to in paragraph 15 19 of your declaration is out of line with the 16 percentage of citations issued to black 17 individuals in Madison County by other 18 agencies, can you? 19 MS. SIVASHANKER: Objection to 20 form. 21 A. That is not a calculation that I 22 performed. 23 Q. So the answer is you cannot tell 24 me how that 72 percent may compare to the 25 percentage of black individuals receiving</p>

18 (Pages 66 to 69)

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<p>1 citations by other agencies?</p> <p>2 MS. SIVASHANKER: Objection to</p> <p>3 form.</p> <p>4 A. That's not a calculation that I</p> <p>5 performed.</p> <p>6 Q. So the answer is you can't tell</p> <p>7 me?</p> <p>8 MS. SIVASHANKER: Objection to</p> <p>9 form, I think he answered. You may go</p> <p>10 ahead.</p> <p>11 A. I believe I have answered the</p> <p>12 question.</p> <p>13 Q. Don't you think it would be</p> <p>14 important to attach any significance to that 72</p> <p>15 percent in paragraph 19 of your declaration?</p> <p>16 MS. SIVASHANKER: Objection to</p> <p>17 form.</p> <p>18 A. I couldn't answer that question</p> <p>19 unless you tell me what you mean by significance.</p> <p>20 Q. It is your declaration, do you see</p> <p>21 any significance in 72 percent?</p> <p>22 MS. SIVASHANKER: Objection to</p> <p>23 form. I think he asked for clarification</p> <p>24 on what you mean by significance, but you</p> <p>25 may answer.</p>	<p>1 MS. SIVASHANKER: Objection to</p> <p>2 form.</p> <p>3 A. No, I did not.</p> <p>4 Q. And in reviewing your report I did</p> <p>5 not see any cited literature or studies or</p> <p>6 reports or learned treatises dealing with the</p> <p>7 racial breakdown of people arrested in other</p> <p>8 jurisdictions other Madison County?</p> <p>9 MS. SIVASHANKER: Objection to</p> <p>10 form.</p> <p>11 A. That's correct.</p> <p>12 Q. And you did not review any</p> <p>13 literature like that, did you?</p> <p>14 MS. SIVASHANKER: Objection to</p> <p>15 form.</p> <p>16 A. For other counties, was that your</p> <p>17 last question?</p> <p>18 Q. Yes, for other jurisdictions.</p> <p>19 A. I did not.</p> <p>20 Q. In light of your representation</p> <p>21 that Simpson Thacher is not your attorney, were</p> <p>22 you told by Simpson Thacher not to do an</p> <p>23 analysis of the citations issued by other law</p> <p>24 enforcement agencies in Madison County?</p> <p>25 A. No, I was not. I mean just so the</p>
Page 71	Page 73
<p>1 A. Unless you tell me what you mean</p> <p>2 by significant. I mean the paragraph speaks</p> <p>3 for itself. The exhibit speaks for itself and</p> <p>4 unless you tell me what you mean by significant</p> <p>5 I can't answer that question.</p> <p>6 Q. What if the citation data from</p> <p>7 other agencies issuing citations in Madison</p> <p>8 County showed that the number of black</p> <p>9 individuals received citations was from those</p> <p>10 other agencies was about 72 percent also, would</p> <p>11 that be significant to you at all?</p> <p>12 MS. SIVASHANKER: Objection to</p> <p>13 form.</p> <p>14 A. I couldn't answer that. Again, I</p> <p>15 could not answer the question unless you give</p> <p>16 me significant -- tell me what significance</p> <p>17 means?</p> <p>18 Q. In reviewing your report, I did</p> <p>19 not see any citations to any authorities,</p> <p>20 literature dealing with the percentage --</p> <p>21 dealing with the percentage of black people</p> <p>22 versus other races that received citations in</p> <p>23 other jurisdictions other than Madison County.</p> <p>24 You did not review any literature like that,</p> <p>25 did you?</p>	<p>1 record is clear, because there are so many --</p> <p>2 now I have lost track of how many negatives</p> <p>3 there are. Simpson Thacher did not tell me not</p> <p>4 to look at those.</p> <p>5 Q. Did Simpson Thacher tell you what</p> <p>6 to look at?</p> <p>7 A. I was asked to do a calculation</p> <p>8 for Madison County, for the Madison County</p> <p>9 Sheriff's Department.</p> <p>10 Q. And did they tell you specifically</p> <p>11 what calculations they wanted you to do?</p> <p>12 MS. SIVASHANKER: Objection to</p> <p>13 form.</p> <p>14 A. Those are the three calculations</p> <p>15 that are listed in paragraph 3 of the assignment</p> <p>16 section of my declaration.</p> <p>17 Q. With regard to those three</p> <p>18 categories of paragraph 3 of your declaration,</p> <p>19 it was Simpson Thacher that told you those were</p> <p>20 the three categories to focus on?</p> <p>21 MS. SIVASHANKER: Objection to</p> <p>22 form.</p> <p>23 A. That's correct.</p> <p>24 Q. In footnote 4 it says, "I have</p> <p>25 been informed by counsel that the citations</p>

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<p>1 data includes citations issued by the following</p> <p>2 law enforcement agencies as identified in the</p> <p>3 correspondent acronyms in parentheses" and you</p> <p>4 list several of them.</p> <p>5 Do you even know what the Madison</p> <p>6 County Constable is?</p> <p>7 MS. SIVASHANKER: Objection to</p> <p>8 form.</p> <p>9 A. Not beyond the fact that they are</p> <p>10 a law enforcement agency in Madison County,</p> <p>11 Mississippi.</p> <p>12 Q. Okay, do you know if a Constable</p> <p>13 has countywide jurisdiction or only</p> <p>14 jurisdiction in a portion of his county?</p> <p>15 MS. SIVASHANKER: Objection to</p> <p>16 form.</p> <p>17 A. I don't know that.</p> <p>18 Q. Do you know if the Pearl River</p> <p>19 Reservoir Patrol, what you call the PRB, has</p> <p>20 jurisdiction over the entire county or just a</p> <p>21 portion of the county?</p> <p>22 MS. SIVASHANKER: Objection to</p> <p>23 form.</p> <p>24 A. I don't know that. That is not</p> <p>25 something that I was asked to look at.</p>	<p>1 to need a couple of minutes.</p> <p>2 MR. ROSS: Let's take five minutes.</p> <p>3 MS. SIVASHANKER: Okay, great.</p> <p>4 (Recess taken.)</p> <p>5 BY MR. ROSS:</p> <p>6 Q. Go to paragraph 7 of Exhibit 3 to</p> <p>7 your declaration. You state, My calculations</p> <p>8 and data summaries are based upon data that was</p> <p>9 available to me as of the date of this</p> <p>10 declaration."</p> <p>11 What is the difference in</p> <p>12 calculations and summaries?</p> <p>13 A. I think they are related concepts.</p> <p>14 I think the only reason there is a distinction</p> <p>15 there, for example, is when I use the data to</p> <p>16 create charts such as that in Exhibit 2, I</p> <p>17 think I would describe that as a data summary</p> <p>18 rather than a calculation.</p> <p>19 Q. Well, let's go to Exhibit 2.</p> <p>20 Actually let's go to Exhibit 1. Does Exhibit 1</p> <p>21 reflect a summary, a calculation or both?</p> <p>22 A. Both.</p> <p>23 Q. What is the calculation?</p> <p>24 A. The calculations are the addition</p> <p>25 of the total number of arrests, 23,017 arrests.</p>
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<p>1 Q. Footnote 4 of your declaration it</p> <p>2 says "I have been informed by counsel." Who is</p> <p>3 the primary counsel that you were working with</p> <p>4 on this?</p> <p>5 MS. SIVASHANKER: Objection to</p> <p>6 form.</p> <p>7 A. Simpson Thacher.</p> <p>8 Q. What individual?</p> <p>9 A. I would say the two individuals</p> <p>10 that I interacted with the most are Isaac Rethy</p> <p>11 and Nihara Choudri. Let me think if -- yes, I</p> <p>12 think those are the two.</p> <p>13 Q. By the way, where is the</p> <p>14 Cornerstone office in New York located?</p> <p>15 A. It is 599 Lexington Avenue.</p> <p>16 Q. Just down the street from where we</p> <p>17 are today?</p> <p>18 A. That's correct, up the street I</p> <p>19 guess.</p> <p>20 Q. About two blocks away?</p> <p>21 A. Nine or 10 blocks.</p> <p>22 MR. ROSS: Off the record.</p> <p>23 (Discussion off the record.)</p> <p>24 MS. SIVASHANKER: Counsel, do you</p> <p>25 want too take a short break if you're going</p>	<p>1 It's a calculation of the number of arrests</p> <p>2 that are of black people. It's a calculation</p> <p>3 of the number of arrests of white people and</p> <p>4 other races. And the percentages are also the</p> <p>5 calculations.</p> <p>6 Q. Go to Exhibit 2, is Exhibit 2 a</p> <p>7 summary, a calculation or both?</p> <p>8 A. Both.</p> <p>9 Q. What is the calculation?</p> <p>10 A. The calculation, for example, if</p> <p>11 you were to look at the first bar that refers</p> <p>12 to no child restraint. That is the offense</p> <p>13 code. So there are two calculations in there.</p> <p>14 One is of all the arrests for that particular</p> <p>15 offense code, what percent are black. And if</p> <p>16 you look at the number and it is not obvious</p> <p>17 from reading, but that is 94 percent. So that</p> <p>18 is a calculation.</p> <p>19 Then you will see in somewhat</p> <p>20 small font the number 193, that is on top of</p> <p>21 that particular bar, that refers to the number</p> <p>22 of arrests where the race is black. So that is</p> <p>23 also a calculation. And so forth for all the -- that is</p> <p>24 the same for all the offense codes on this</p> <p>25 exhibit.</p>

20 (Pages 74 to 77)

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<p>1 Q. On Exhibit 2 you have a dashed 2 line of 38.4 percent which you say represents 3 the population of Madison County that was black 4 as of July 1st, 2016; is that correct? 5 A. I think you said population, I 6 think it is the percent of the population of 7 Madison County that was black. 8 Q. Exhibit 2 deals with arrests; is 9 that correct? 10 MS. SIVASHANKER: Objection to 11 form. 12 A. It does, yes. 13 Q. Do you know the percent of arrests 14 in Madison County that were Madison County 15 residents as compared to non-Madison County 16 residents? 17 MS. SIVASHANKER: Objection to 18 form. 19 A. No, I don't believe that 20 information is contained in the data set. I 21 think the data set pertains to the arrests that 22 were made by the Madison County Sheriff's 23 Department. 24 Q. You would agree with me that the 25 Madison County Sheriff's Department can arrest</p>	<p>1 MS. SIVASHANKER: Objection to 2 form. 3 A. Arrests. If we go to paragraph 3A 4 I understand that these data represent all 5 individuals arrested by the MCS D, which is 6 Madison County Sheriff's Department, and booked 7 into the Madison County Detention Center from 8 January 1st, 2012 through September 20th, 2017. 9 Q. I understand that. And then it 10 goes on to say the data includes -- well, 11 you're reading from paragraph? 12 A. 3A. 13 Q. 3A. You say these data. What is 14 that data? Is it incident reports, is it CDD 15 records, what is that data? 16 MS. SIVASHANKER: Objection to 17 form. I think this is has been asked, but 18 go ahead. 19 A. It is data of all the individuals 20 arrested. It is refers to -- it's a row of data refers 21 to an individual who was arrested by the Madison 22 County Sheriff's Department and booked into the 23 detention center. 24 Q. Okay, footnote 2 which is referred 25 to in paragraph 3A talks about it being a copy</p>
Page 79	Page 81
<p>1 somebody from Hinds County who commits a crime 2 in Madison County, right? 3 MS. SIVASHANKER: Objection to 4 form. 5 A. I don't know that for a fact, but 6 I assume that is true. 7 Q. So you have no information on the 8 percentage of arrests in Madison County by the 9 Madison County Sheriff's Department that were 10 of people who did not reside in Madison County? 11 MS. SIVASHANKER: Objection to 12 form. 13 A. No, again I'm thinking back to the 14 data set and I do not believe that that data 15 set contains information on the residential 16 address of the person who was arrested. 17 Q. Well, what was the data set based 18 upon? 19 MS. SIVASHANKER: Objection to 20 form. 21 Q. Was it based upon incident 22 reports? 23 MS. SIVASHANKER: Objection to 24 form. 25 Q. For arrests I'm talking about?</p>	<p>1 of the Madison County detention jail docket for 2 1/20/2012 through 9/20, 2017. And then 3 reflects "Only arrests made by the Madison 4 County Sheriff's Department and not those made 5 by other arresting agencies." 6 Do you know if that copy of the 7 jail docket which is referred to in footnote 2 8 contains the address of the offender that was 9 arrested? 10 A. I do not. I mean it says it's a 11 copy and the particular data set that I have 12 looked at does not contain that information. 13 Whether the detention center has more 14 information than what I have seen, I do not 15 know. 16 Q. You're saying what you looked at, 17 you're testifying affirmatively what you looked 18 at did not contain the address of the offender, 19 right? 20 MS. SIVASHANKER: Objection to 21 form. 22 A. That's correct. 23 Q. Go back to Exhibit 3. 24 A. Exhibit 3? 25 Q. Yes. Is Exhibit 3 a calculation</p>

21 (Pages 78 to 81)

<p style="text-align: right;">Page 82</p> <p>1 or a summary or both?</p> <p>2 A. Both.</p> <p>3 Q. What is the calculation in</p> <p>4 Exhibit 3? Just the computation of the</p> <p>5 percentages?</p> <p>6 A. And the act of adding up the</p> <p>7 number of citations.</p> <p>8 Q. Now, Exhibit 4, is Exhibit 4 a</p> <p>9 computation, a summary or both?</p> <p>10 A. Both.</p> <p>11 Q. And the calculation is just</p> <p>12 computing the percentages for each particular</p> <p>13 type of incident, violation category?</p> <p>14 A. And adding up the number of</p> <p>15 individuals who received citations that were a</p> <p>16 particular race.</p> <p>17 Q. Exhibit 4 deals with citations,</p> <p>18 right?</p> <p>19 A. That's correct.</p> <p>20 Q. Do you know the percentage of</p> <p>21 citations issued by the Madison County</p> <p>22 Sheriff's Department for the relevant time</p> <p>23 period that were issued to Madison County</p> <p>24 residents as opposed to non-Madison County</p> <p>25 residents?</p>	<p style="text-align: right;">Page 84</p> <p>1 is it?</p> <p>2 MS. SIVASHANKER: Objection to</p> <p>3 form.</p> <p>4 A. I wouldn't agree with that.</p> <p>5 Q. Why did you put that benchmark in</p> <p>6 there?</p> <p>7 A. It is purely a benchmark. It</p> <p>8 literally is what it is. I mean it's a benchmark which</p> <p>9 is the proportion of Madison County residents</p> <p>10 that are black.</p> <p>11 Q. But that has no correlation with</p> <p>12 your citation data because you don't know who</p> <p>13 receives citations that lives in Madison County</p> <p>14 as opposed to outside of Madison County, right?</p> <p>15 MS. SIVASHANKER: Objection to</p> <p>16 form.</p> <p>17 A. I'm not sure that I understand the</p> <p>18 question. Can you show me anywhere in my</p> <p>19 declaration where I have asserted a correlation?</p> <p>20 I mean it's a benchmark and that's what it is.</p> <p>21 Q. So you would agree you're not</p> <p>22 saying there is a correlation; is that correct?</p> <p>23 MS. SIVASHANKER: Objection to</p> <p>24 form.</p> <p>25 A. I have described it in my</p>
<p style="text-align: right;">Page 83</p> <p>1 MS. SIVASHANKER: Objection to</p> <p>2 form.</p> <p>3 A. No, I don't.</p> <p>4 Q. Does your calculations as</p> <p>5 reflected in Exhibit 4 assume that all the</p> <p>6 citations that you looked at were of Madison</p> <p>7 County residents?</p> <p>8 MS. SIVASHANKER: Objection to</p> <p>9 form.</p> <p>10 A. It doesn't make an assumption one</p> <p>11 way or the other in that regard.</p> <p>12 Q. Going back to arrests, does your</p> <p>13 calculations with regard to arrests assume that</p> <p>14 all the arrests in Madison County were of</p> <p>15 Madison County residents?</p> <p>16 MS. SIVASHANKER: Objection to</p> <p>17 form.</p> <p>18 A. It doesn't make an assumption one</p> <p>19 way or the other in that regard.</p> <p>20 Q. Well, if you did not consider</p> <p>21 whether people who received citations in</p> <p>22 Madison County were Madison County residents or</p> <p>23 not, then the benchmark of population</p> <p>24 black/white in Madison County as reflected by</p> <p>25 the dotted line in Exhibit 4 is not meaningful,</p>	<p style="text-align: right;">Page 85</p> <p>1 declaration. I mean it's a benchmark and</p> <p>2 that's all it is. I'm not sure like -- I know</p> <p>3 that I have not made any particular assertions</p> <p>4 about correlations. So I'm not sure how to</p> <p>5 answer that question.</p> <p>6 Q. Referring to Exhibit 4 and</p> <p>7 Exhibit 2, why did you use the racial breakdown</p> <p>8 of the population in Madison County as a</p> <p>9 benchmark?</p> <p>10 MS. SIVASHANKER: Objection to</p> <p>11 form.</p> <p>12 A. It's just a benchmark that allows</p> <p>13 you to evaluate the proportion of arrests and</p> <p>14 compare it with the demographic composition.</p> <p>15 Q. And you chose that benchmark</p> <p>16 despite the fact that you admit that you don't</p> <p>17 know the proportion of arrests that were</p> <p>18 Madison County residents or not Madison County</p> <p>19 residents?</p> <p>20 MS. SIVASHANKER: Objection to</p> <p>21 form.</p> <p>22 A. That's correct.</p> <p>23 Q. And the same is true with</p> <p>24 citations, right?</p> <p>25 MS. SIVASHANKER: Objection to</p>

22 (Pages 82 to 85)

<p style="text-align: right;">Page 86</p> <p>1 form.</p> <p>2 A. That's correct.</p> <p>3 Q. Go to Exhibit 5. What portion of</p> <p>4 Exhibit 5 was a summary, was a calculation or</p> <p>5 both?</p> <p>6 A. I think it's a combination of</p> <p>7 both.</p> <p>8 Q. So you circulated the number of</p> <p>9 citations and then you did a percentage</p> <p>10 calculation, is that accurate?</p> <p>11 MS. SIVASHANKER: Objection to</p> <p>12 form.</p> <p>13 A. That is not quite accurate.</p> <p>14 Because Exhibit 5 refers to the individuals</p> <p>15 cited for a seatbelt violation only. I went</p> <p>16 back to the data set and I identified people</p> <p>17 that had only the seatbelt violation.</p> <p>18 So, in other words, this exhibit</p> <p>19 does not contain individuals that might have</p> <p>20 been cited for a seatbelt violation and</p> <p>21 something else. So those people are excluded</p> <p>22 from the...</p> <p>23 Q. And then you did a percentage</p> <p>24 calculation; is that correct?</p> <p>25 A. That's correct.</p>	<p style="text-align: right;">Page 88</p> <p>1 summary, a calculation or both?</p> <p>2 A. I couldn't put a quantitative</p> <p>3 number on it, it's a combination. There is</p> <p>4 calculations here and there are calculations</p> <p>5 summarized here.</p> <p>6 Q. It purports to be a summary of</p> <p>7 numbers of arrests related to stops at</p> <p>8 roadblocks and then you take that number and</p> <p>9 you do a percentage calculation, right?</p> <p>10 MS. SIVASHANKER: Objection to</p> <p>11 form.</p> <p>12 A. That's correct.</p> <p>13 Q. Go to footnote 1 in Exhibit 6,</p> <p>14 footnote 1. Evidently the data that you</p> <p>15 reflect in Exhibit 6 was based upon incident</p> <p>16 reports; is that correct.</p> <p>17 A. That is correct.</p> <p>18 Q. And evidently you or somebody at</p> <p>19 Cornerstone did a word search to come up with</p> <p>20 the numbers that are reflected in Exhibit 6; is</p> <p>21 that right?</p> <p>22 MS. SIVASHANKER: Objection to</p> <p>23 form.</p> <p>24 A. That is correct.</p> <p>25 Q. And that word search was roadblock</p>
<p style="text-align: right;">Page 87</p> <p>1 Q. Did Simpson Thacher tell you to go</p> <p>2 back and do your work where you picked out only</p> <p>3 the seatbelt violation citations?</p> <p>4 MS. SIVASHANKER: Objection to</p> <p>5 form.</p> <p>6 Q. Or did you decide to do that</p> <p>7 yourself?</p> <p>8 MS. SIVASHANKER: Objection to</p> <p>9 form.</p> <p>10 A. I was asked to perform that</p> <p>11 calculation by counsel.</p> <p>12 Q. Do you know the percentage of</p> <p>13 those seatbelt only violations which you</p> <p>14 purport to summarize in Exhibit 5, do you know</p> <p>15 the proportion of those that were of people who</p> <p>16 lived outside of Madison County as opposed to</p> <p>17 inside Madison County?</p> <p>18 MS. SIVASHANKER: Objection to</p> <p>19 form.</p> <p>20 A. No, I do not.</p> <p>21 Q. Exhibit 6, what portion of</p> <p>22 Exhibit 6 is a summary, a calculation or both?</p> <p>23 A. Sorry, can you repeat the</p> <p>24 question, please?</p> <p>25 Q. What portion of Exhibit 6 was a</p>	<p style="text-align: right;">Page 89</p> <p>1 "Roadblock or road block or checkpoint or check</p> <p>2 point or safety check." Is that correct?</p> <p>3 A. That's correct.</p> <p>4 Q. Who came up with that word search?</p> <p>5 MS. SIVASHANKER: Objection to</p> <p>6 form.</p> <p>7 A. Again, these were terms that we</p> <p>8 were instructed to use for these calculations</p> <p>9 by counsel.</p> <p>10 Q. After that word search -- who did</p> <p>11 the word search?</p> <p>12 MS. SIVASHANKER: Objection to</p> <p>13 form.</p> <p>14 A. As I think we discussed a while</p> <p>15 back, the word searching was done in an</p> <p>16 automated fashion. One of the analysts, I mean</p> <p>17 I think the one that primarily would have been</p> <p>18 responsible for writing the code in that regard</p> <p>19 would have been Tyler. But this was done in an</p> <p>20 automated fashion.</p> <p>21 Q. Now, once that word search pulled</p> <p>22 up the incident reports responsive to that</p> <p>23 particular word search, did anybody go back and</p> <p>24 look manually at those incident reports and</p> <p>25 read them?</p>

23 (Pages 86 to 89)

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<p>1 MS. SIVASHANKER: Objection to</p> <p>2 form.</p> <p>3 A. No.</p> <p>4 Q. Go to Exhibit 7. Exhibit 7 and we</p> <p>5 are going to come back and get into these in</p> <p>6 more detail I want to make sure that I have an</p> <p>7 overview.</p> <p>8 Exhibit 7, tell me what is a</p> <p>9 summary and what is a calculation or both?</p> <p>10 A. It is both.</p> <p>11 Q. You came up with the number of</p> <p>12 arrests from apartment walk throughs and then</p> <p>13 you did a calculation, percentage calculation</p> <p>14 based upon the number of arrests that you had</p> <p>15 come up with, right?</p> <p>16 MS. SIVASHANKER: Objection to</p> <p>17 form.</p> <p>18 A. That's correct.</p> <p>19 Q. Look at footnote 1, the search</p> <p>20 terms was walk through, or walk-through or walk</p> <p>21 thru, T H R U or walk through T H R U,</p> <p>22 walk-thru T H R U or walk-through or apartment</p> <p>23 walk_through. Is that correct?</p> <p>24 A. That's correct.</p> <p>25 Q. Who came up with these search</p>	<p>1 form.</p> <p>2 A. No, I do not.</p> <p>3 Q. Do you know what the definition of</p> <p>4 an apartment complex is in Madison County?</p> <p>5 MS. SIVASHANKER: Objection to</p> <p>6 form.</p> <p>7 A. No, I do not.</p> <p>8 Q. Do you know the percentage of</p> <p>9 Madison County residents that live in apartments,</p> <p>10 black/white?</p> <p>11 MS. SIVASHANKER: Objection to</p> <p>12 form.</p> <p>13 A. No, I do not.</p> <p>14 Q. Do you know if there are or are</p> <p>15 not certain apartment complexes in Madison</p> <p>16 County that have high rates of crime as</p> <p>17 compared to other parts of the county?</p> <p>18 MS. SIVASHANKER: Objection to</p> <p>19 form.</p> <p>20 A. No, I don't. No, those were not</p> <p>21 pertinent to the calculations that I was asked</p> <p>22 to perform.</p> <p>23 Q. If there are apartment complexes</p> <p>24 that are predominantly black that have high</p> <p>25 rates of crime, do you take exemption to the</p>
Page 91	Page 93
<p>1 terms?</p> <p>2 MS. SIVASHANKER: Objection to</p> <p>3 form.</p> <p>4 A. We performed the calculations</p> <p>5 using search terms provided by counsel.</p> <p>6 Q. Now, I don't see the word</p> <p>7 apartment in those search terms -- I see it at</p> <p>8 the end apartment walk through, do you see</p> <p>9 that?</p> <p>10 A. I do.</p> <p>11 Q. But those search terms would also</p> <p>12 pick up walk throughs if the word walk through</p> <p>13 or walk thru, T H R U, was used in an incident</p> <p>14 report regarding a neighborhood, would it not?</p> <p>15 MS. SIVASHANKER: Objection to</p> <p>16 form.</p> <p>17 A. It could.</p> <p>18 Q. The same is true for a walk</p> <p>19 through through a festival, right?</p> <p>20 MS. SIVASHANKER: Objection to</p> <p>21 form.</p> <p>22 A. It's possible.</p> <p>23 Q. Do you know the names of any</p> <p>24 apartment complexes in Madison County?</p> <p>25 MS. SIVASHANKER: Objection to</p>	<p>1 Madison County Sheriff's Department doing more</p> <p>2 walk throughs in that area than in other areas</p> <p>3 of the county where the crime rate is not as</p> <p>4 high?</p> <p>5 MS. SIVASHANKER: Objection to</p> <p>6 form.</p> <p>7 A. I have no opinion on that. I</p> <p>8 don't believe I have provided any view on this</p> <p>9 in my declaration.</p> <p>10 Q. Exhibit 7 doesn't take that into</p> <p>11 account, does it?</p> <p>12 MS. SIVASHANKER: Objection to</p> <p>13 form.</p> <p>14 A. I don't believe that that is what</p> <p>15 the calculation is performing one way or the</p> <p>16 other.</p> <p>17 Q. Let's go to Exhibit 8. Exhibit 8</p> <p>18 pertains to arrests from incident reports related</p> <p>19 to traffic stops. It's a subset I believe you</p> <p>20 would call it in your description of this is</p> <p>21 part of your third area of inquiry, right?</p> <p>22 MS. SIVASHANKER: Objection to</p> <p>23 form.</p> <p>24 A. That's correct.</p> <p>25 Q. Who told you or told Cornerstone</p>

24 (Pages 90 to 93)

<p style="text-align: right;">Page 94</p> <p>1 to focus on incident reports related to traffic 2 stops?</p> <p>3 MS. SIVASHANKER: Objection to 4 form.</p> <p>5 A. Counsel provided that instruction.</p> <p>6 Q. Now, let's look at the search 7 terms identified in footnote 1. First of all, 8 let me ask you, what do you consider a traffic 9 stop, if you know?</p> <p>10 MS. SIVASHANKER: Objection to 11 form.</p> <p>12 A. I don't know what the legal 13 definition of a traffic stop is. Let me just -- give me 14 a minute.</p> <p>15 (Witness reviewing document.)</p> <p>16 A. No, I don't have a full 17 understanding of what legal definition of a 18 traffic stop is.</p> <p>19 Q. Let's look at footnote 1, the 20 search terms. The search term was "(Stop or 21 VTO or DUI or traffic offenses) and arrest." 22 Who came up with that search term?</p> <p>23 MS. SIVASHANKER: Objection to 24 form.</p> <p>25 A. Instructions came from counsel.</p>	<p style="text-align: right;">Page 96</p> <p>1 Q. In Exhibit 8 does traffic stops 2 include roadblocks or do you know?</p> <p>3 MS. SIVASHANKER: Objection to 4 form.</p> <p>5 A. I'm not sure. I don't know that. 6 I can't answer that sitting here whether the 7 term stop includes roadblocks or not. I'm not 8 sure.</p> <p>9 Q. Do you know the difference between 10 a traffic stop and a roadblock?</p> <p>11 MS. SIVASHANKER: Objection to 12 form.</p> <p>13 A. Not in a legal sense.</p> <p>14 Q. Well, looking at those search 15 terms you could have DUI on the incident report 16 and arrest and it would pull that incident 17 report, would it not?</p> <p>18 A. Yes, it would.</p> <p>19 Q. Do you know what percentage of 20 DUIs in Madison County result from roadblocks 21 as opposed to traffic stops?</p> <p>22 MS. SIVASHANKER: Objection to 23 form.</p> <p>24 A. I have not done that calculation, 25 I don't know that.</p>
<p style="text-align: right;">Page 95</p> <p>1 Q. So I take it with all of these 2 search terms that we have talked about 3 Cornerstone did not do any analysis as to 4 whether you thought it was a search term that 5 would capture the information that was 6 requested. You just took the search terms and 7 used them, right?</p> <p>8 MS. SIVASHANKER: Objection to 9 form.</p> <p>10 A. That's correct.</p> <p>11 Q. Now, why is that search term -- 12 why does it have the parenthesis in there. 13 (Stop or VTO or DUI or traffic offenses), what 14 does the parenthesis do?</p> <p>15 A. It just says that for -- the 16 parens says for any of these offenses let me 17 identify the subsets that actually led to 18 arrests. That is all the parenthesis does. 19 Which is the equivalent as saying stop and 20 arrest, VTO and arrest, DUI and the paren is a 21 shorthand way of first identifying the subset 22 that had any of these offenses, traffic 23 offenses and of the people that had those 24 particular terms, let's just identify the 25 subsets that led to arrests.</p>	<p style="text-align: right;">Page 97</p> <p>1 Q. Do you consider a roadblock the 2 same thing as a traffic stop?</p> <p>3 MS. SIVASHANKER: Objection to 4 form.</p> <p>5 A. I believe I already answered that. 6 I do not understand what the legal distinction 7 is between the two.</p> <p>8 Q. Go to Exhibit 9. This is another 9 subset which is entitled arrest from incident 10 reports related to traffic stops initiated for 11 a seatbelt violation only.</p> <p>12 The search terms were seatbelt or 13 seat belt or safety belt or b-u-c-k-l; is that 14 correct, footnote 1?</p> <p>15 A. That's correct.</p> <p>16 Q. Once again, did you come -- did 17 Cornerstone come up with these terms or did 18 counsel?</p> <p>19 MS. SIVASHANKER: Objection to 20 form.</p> <p>21 A. Counsel did.</p> <p>22 Q. With regard to Exhibit 9 how did 23 you determine that the arrests reflected on 24 Exhibit 9 related to traffic stops were 25 "Initiated for a seat belt violation only"?</p>

25 (Pages 94 to 97)

<p style="text-align: right;">Page 98</p> <p>1 MS. SIVASHANKER: Objection to 2 form. 3 A. This is by actually reading the 4 narratives of the incident reports. 5 Q. Who read the narratives? 6 A. I did. 7 Q. Every one of them? 8 A. Between Stephanie and I, we read 9 every one of them. 10 Q. How many incident reports did you 11 read? 12 A. I mean the team read every single 13 one of them which is about 500 odd and I did 14 not read all 574 and I would have read I would 15 say 50 or 60 as a checking procedure to make 16 sure that I agreed with how to categorize 17 things. 18 Q. How many of the seatbelt 19 violations, seatbelt arrests on Exhibit 9 were 20 the result of an outstanding warrant, do you 21 know? 22 MS. SIVASHANKER: Objection to 23 form. 24 A. I'm sorry, can you repeat the 25 question again?</p>	<p style="text-align: right;">Page 100</p> <p>1 provided I think opinions on that. 2 Q. Do you know if a person has an 3 outstanding warrant and that is discovered at a 4 roadblock, whether arresting that person is 5 discretionary or mandatory? 6 MS. SIVASHANKER: Objection to 7 form. 8 A. No, that's really not what the 9 topic of Exhibit 9 is. 10 Q. Well, it's a topic that I want to 11 ask you about but you volunteered a declaration 12 here. Of those 102 arrests on Exhibit 9, do 13 you know how many of those people pled guilty? 14 MS. SIVASHANKER: Objection to 15 form. 16 A. No. 17 Q. Do you know how many of those 18 people were convicted even if they didn't plead 19 guilty? 20 MS. SIVASHANKER: Objection to 21 form. 22 A. No, I don't believe it is anywhere 23 in my declaration. 24 Q. With any of the -- the same thing 25 with Exhibit 8, do you know -- you have 3,227</p>
<p style="text-align: right;">Page 99</p> <p>1 Q. Of the 102 arrests reflected on 2 Exhibit 9, how many of those arrests were 3 pursuant to a warrant? 4 MS. SIVASHANKER: Objection to 5 form. 6 A. I don't -- I don't believe you can 7 tell that from this exhibit. What the 102 8 number refers to is how many arrests were 9 initiated only as a result of a seatbelt 10 violation. Subsequently something else might 11 have happened but the 102 refers to how many 12 were arrested only because of a seatbelt 13 violation. The starting point of the arrest 14 was a seatbelt violation. 15 Q. Does Exhibit 9 reflect which of 16 those arrests were at safety roadblocks? 17 MS. SIVASHANKER: Objection to 18 form. 19 A. No, I don't believe that is 20 reported here. 21 Q. Do you know how Madison County 22 conducts roadblocks? 23 MS. SIVASHANKER: Objection to 24 form. 25 A. No, I don't believe I have</p>	<p style="text-align: right;">Page 101</p> <p>1 arrests of which 2,393 were black according to 2 your Exhibit 8. Do you know what proportion of 3 those arrests the people pled guilty? 4 MS. SIVASHANKER: Objection to 5 form. 6 A. No, I don't believe that's a 7 calculation that I have done anywhere in my 8 declaration. 9 Q. The same thing with Exhibit 7, you 10 don't know what proportion pled guilty? 11 MS. SIVASHANKER: Objection to 12 form. 13 Q. Or were convicted? 14 A. That is not a calculation that I 15 offered anywhere in my declaration. 16 Q. The same thing with Exhibit 6, I 17 just need to for the record go through each one 18 of these. The arrests reflected in Exhibit 6 19 you don't know what proportion of those 20 individuals pled guilty or were convicted, do 21 you? 22 MS. SIVASHANKER: Objection to 23 form. 24 A. That is not a calculation that I 25 performed anywhere in my declaration.</p>

26 (Pages 98 to 101)

<p style="text-align: right;">Page 102</p> <p>1 Q. With regard to Exhibit 6, you 2 don't know what proportion of those individuals 3 who were addressed pursuant it an outstanding 4 warrant, do you? 5 MS. SIVASHANKER: Objection to 6 form. 7 A. That is not a calculation that I 8 performed anywhere in my declaration. 9 Q. With regard to Exhibit 2, you 10 don't know what percentage of those arrests 11 reflected in Exhibit 2 resulted in a guilty 12 plea or conviction, do you? 13 MS. SIVASHANKER: Objection to 14 form. 15 A. That's not a calculation that I 16 have done anywhere in my declaration. 17 Q. With regard to Exhibit 1, the same 18 question and I assume the same answer, you do 19 not know the percentage of those arrests where 20 the individual ended up pleading guilty or was 21 convicted, do you? 22 MS. SIVASHANKER: Objection to 23 form. 24 A. That is not a calculation that I 25 have done in my declaration.</p>	<p style="text-align: right;">Page 104</p> <p>1 if you see duplicates in any data set is that 2 real data or is it because there was some error 3 in the data generating process and it is truly 4 a duplicate. 5 In this particular case what we 6 have deemed to be duplicates are if you look at 7 a row of data -- let me explain this a little 8 more clearly. If you look at two rows of data 9 that have exactly the same name, exactly the 10 same race, sex, date and offense code, we made 11 the judgment call that this is the same person 12 committing the same offense. 13 But in the kind of example that we 14 had in our mind was let's say you had a person 15 walking down a street and the person knocks 16 down three mailboxes, and so you would have 17 three entries because it is the same person, 18 same sex the same date and everything is the 19 same and the offense code is the same. 20 In that sort of situation we treat 21 that duplicate and remove those duplicates. 22 However if you in contrast imagine 23 two rows of data in which you have the same 24 name, the same sex, same a race but the offense 25 code is different even though it is on the same</p>
<p style="text-align: right;">Page 103</p> <p>1 Q. Let's go back to the text of your 2 declaration on page 3. I want to ask you about 3 paragraph 9. This is dealing with arrest data. 4 You state, "My calculation is 5 based upon the arrest data after duplicates 6 have been removed based upon the combination of 7 name, race, sex, date and offense code. I 8 assume that such duplicates indicate that an 9 individual was charged with multiple counts of 10 the same offense rather than such duplicates 11 indicating two difference arrests and booking 12 incidents on a single day. Removing these 13 duplicates removes 2,559 observations, 10 14 percent of the total observations in the arrest 15 data." 16 Tell me, I read paragraph 9 but I 17 don't understand it. I want you to explain it 18 to me how you or the people under you 19 approached duplicates in the arrest data and 20 how you accounted for it? 21 MS. SIVASHANKER: Objection to 22 form. 23 A. Sure. So cleaning data is a 24 standard part of what you do as a first step in 25 working with a data set. And the question is</p>	<p style="text-align: right;">Page 105</p> <p>1 date it is not a duplicate, we keep that in the 2 data. That is the process that we undertook 3 that is described in paragraph 9. 4 Q. If I'm pulled over at a traffic 5 stop and I'm arrested on a certain date at a 6 certain time for possession of marijuana and 7 I'm charged with that offense code, and I'm 8 also charged with not having a driver's 9 license, and I'm also charged with not having 10 my seatbelt on and I'm also charged with 11 distribution of drugs based upon an outstanding 12 warrant, would you count that as four arrests 13 or one arrest? 14 MS. SIVASHANKER: Objection to 15 form. 16 A. That would be four rows in the 17 data. Those would not be removed. All four 18 rows would remain in the data set because the 19 offense codes are different. 20 Q. Even though I was just arrested 21 one time? 22 MS. SIVASHANKER: Objection to 23 form. 24 A. Yes. 25 Q. What if everything on the row</p>

27 (Pages 102 to 105)

<p style="text-align: right;">Page 106</p> <p>1 matches but the date?</p> <p>2 MS. SIVASHANKER: Objection to</p> <p>3 form.</p> <p>4 A. That would not be a duplicate.</p> <p>5 Q. In your other work when you're</p> <p>6 dealing with data, do you ever go interview the</p> <p>7 people who compile the data on the ground here</p> <p>8 at the sheriff's department or at some</p> <p>9 corporation to find out their methodology in</p> <p>10 entering the data and everything?</p> <p>11 MS. SIVASHANKER: Objection to</p> <p>12 form.</p> <p>13 A. It depends on the data set. Not</p> <p>14 always.</p> <p>15 Q. But in some cases?</p> <p>16 A. It depends on the data set. I</p> <p>17 think many of the data sets that I work with, I</p> <p>18 mean you know where the data comes from. Some</p> <p>19 corporation or some entity or somebody or some</p> <p>20 person vouches for that data and, you know, I</p> <p>21 mean, especially given the volume of data these</p> <p>22 days it is not feasible or necessary to go back</p> <p>23 and sort of check the validity of the data. I</p> <p>24 mean you --</p> <p>25 Q. Do you ever go talk to the people</p>	<p style="text-align: right;">Page 108</p> <p>1 arrest data.</p> <p>2 Describe the arrest data for me?</p> <p>3 Are you talking about an incident report? Are</p> <p>4 you talking about CDD data? What are you</p> <p>5 referring to?</p> <p>6 MS. SIVASHANKER: Objection to</p> <p>7 form.</p> <p>8 A. So I think in trying to do this</p> <p>9 from memory I think it is exactly as laid out</p> <p>10 in paragraph 3A and footnote 2. So I could</p> <p>11 read that out for you if you think that would</p> <p>12 be helpful. That is the most accurate way in</p> <p>13 which I can describe that particular data set.</p> <p>14 Q. Okay. So that data set is</p> <p>15 described in detail in footnote 2, right?</p> <p>16 A. And paragraph 3A.</p> <p>17 Q. And 3A. Okay.</p> <p>18 Now, do you take in deciding what</p> <p>19 is duplicate or not a duplicate -- first of all</p> <p>20 let me ask you, in deciding what is duplicate</p> <p>21 or not a duplicate, do you take into account</p> <p>22 how people move through the judicial process in</p> <p>23 Madison County?</p> <p>24 MS. SIVASHANKER: Objection to</p> <p>25 form.</p>
<p style="text-align: right;">Page 107</p> <p>1 who enter the data to learn their process and</p> <p>2 their thinking in entering the data?</p> <p>3 MS. SIVASHANKER: Objection to</p> <p>4 form.</p> <p>5 A. You know I'm trying to think of</p> <p>6 data that I commonly use. I commonly use data</p> <p>7 from sources like IMS which has data on</p> <p>8 pharmaceutical sales. There is no question of</p> <p>9 going to the source and asking how you entered</p> <p>10 the data. That is the data that you get and it</p> <p>11 is widely considered to be a reliable source</p> <p>12 and you use the data.</p> <p>13 If you were to work with stock</p> <p>14 price data, securities data you would download</p> <p>15 the data from the Crisp database and you would</p> <p>16 not go to the New York Stock Exchange and try</p> <p>17 to figure out whether some trades actually</p> <p>18 happened.</p> <p>19 So, no, I mean like you know for</p> <p>20 the vast majority of cases that I could think</p> <p>21 of, I mean going back and sort of trying to</p> <p>22 sort of figure out how the data were compiled</p> <p>23 you know is not feasible or sensible.</p> <p>24 Q. Now, let's go back to page 3 of</p> <p>25 your declaration when it is talking about the</p>	<p style="text-align: right;">Page 109</p> <p>1 A. I'm not sure that I understand the</p> <p>2 question.</p> <p>3 Q. Well, let's say I'm arrested and</p> <p>4 I'm taken to jail, do you know what type of</p> <p>5 record is at the jail?</p> <p>6 MS. SIVASHANKER: Objection to</p> <p>7 form.</p> <p>8 A. Again, I'm not sure that I</p> <p>9 understand the question and how that pertains</p> <p>10 to a row of data in this particular data set.</p> <p>11 A row in this data set is date, a person, sex,</p> <p>12 race, offense.</p> <p>13 Q. Okay, and that is based upon the</p> <p>14 jail docket entries, right?</p> <p>15 A. That's correct.</p> <p>16 Q. If I'm arrested and I'm taken to</p> <p>17 jail, is a jail docket entry made that I have</p> <p>18 been arrested?</p> <p>19 MS. SIVASHANKER: Objection to</p> <p>20 form.</p> <p>21 A. I mean, again, I don't know</p> <p>22 physically sort of how the data is generated</p> <p>23 and if somebody writes this down and how it</p> <p>24 finds its way into the Excel spreadsheet, I</p> <p>25 couldn't answer that question. Again what I do</p>

28 (Pages 106 to 109)

<p style="text-align: right;">Page 110</p> <p>1 know is what a row of data in the Excel 2 spreadsheet means.</p> <p>3 Q. I'm asking you if you know -- my 4 question again is, if I'm arrested in Madison 5 County and taken to the Madison County Jail, is 6 an entry made on the docket of the Madison 7 County Jail?</p> <p>8 MS. SIVASHANKER: Objection to 9 form, I think he answered. Please go 10 ahead.</p> <p>11 A. That's my assumption. That's what -- 12 Q. That's your assumption?</p> <p>13 A. That's what it says. That's the 14 representation that this is, again, going back 15 to 3A, it says I understand that "these data 16 represent all individuals arrested by the MCSD 17 and booked into the Madison County Detention 18 Center from January 1st, 2012 through September 19 20th, 2017." So I think that this is the 20 clearest explanation for what a row of data is.</p> <p>21 Q. So back to my hypothetical. I'm 22 arrested and taken to jail and there is an entry in 23 the docket and reflected as a line number in 24 your spreadsheet, okay.</p> <p>25 A. Correct.</p>	<p style="text-align: right;">Page 112</p> <p>1 A. I don't know. I have no 2 independent view on how often that happens.</p> <p>3 Q. So, continuing the hypothetical, 4 let's assume I'm indicted and they arrest me 5 based upon the indictment, and I ultimately get 6 convicted but I'm given probation and I violate 7 my probation, does that create a separate entry -- and 8 I'm put in jail, does that create a separate 9 entry on the jail docket?</p> <p>10 MS. SIVASHANKER: Objection to 11 form.</p> <p>12 A. I imagine that generates a 13 separate entry because that is a separate 14 offense code. You're violating the terms of 15 your parole or something else. Based on the 16 way the data have been described that would 17 generate a different row of data.</p> <p>18 Q. Let me ask you a different way. 19 We talked about the hypothetical, I get 20 arrested, I bail out, I get indicted, they 21 arrest me and then I'm convicted and I'm taken 22 into conviction post-conviction, would that be 23 a separate entry in the jail code, do you know?</p> <p>24 MS. SIVASHANKER: Objection to 25 form.</p>
<p style="text-align: right;">Page 111</p> <p>1 Q. Let's say I bail out and a few 2 months later I'm indicted and I get arrested 3 again and based upon that indictment I'm taken 4 to jail. Do you know if a separate entry in 5 the jail docket is made?</p> <p>6 MS. SIVASHANKER: Objection to 7 form.</p> <p>8 A. I don't. I don't know how it is 9 treated, if it is tagged back to the same row 10 of data. If it is the same offense for which 11 the person is being rearrested following bail, 12 I don't know whether that would generate two 13 rows of data.</p> <p>14 Q. So you're data -- you can't say if 15 your data takes that into account and treats 16 that as a duplicate or not, can you?</p> <p>17 MS. SIVASHANKER: Objection to 18 form.</p> <p>19 A. No, I don't believe I have 20 addressed that question and again that's a -- I 21 mean -- is that two arrests or one arrest, I 22 don't know.</p> <p>23 Q. Do you know if that happens often?</p> <p>24 MS. SIVASHANKER: Objection to 25 form.</p>	<p style="text-align: right;">Page 113</p> <p>1 A. What was the second arrest?</p> <p>2 MR. ROSS: Off the record for a 3 minute. 4 (Recess taken.)</p> <p>5 BY MR. ROSS:</p> <p>6 Q. Let's say I get arrested for 7 aggravated assault and I'm taken to the jail 8 and an entry is made in the jail docket and I 9 bail out and then I get indicted and I'm 10 arrested and another entry is made in the jail 11 docket and I bail out again and then I get 12 convicted and I'm arrested post-conviction and 13 another entry is made in the jail docket. 14 Would your data treat that as a duplicate, 15 those three instances as a duplicates or would 16 you treat it as three separate arrests?</p> <p>17 MS. SIVASHANKER: Objection to form.</p> <p>18 A. I think that depends on what the 19 jail docket does with it. If it is all linked 20 back to the original offense which in your 21 example was aggravated assault, as I answered 22 previously what I don't know is that when this 23 particular data set a generated there are three 24 arrests now, but they all pertain to one 25 offense.</p>

29 (Pages 110 to 113)

<p style="text-align: right;">Page 114</p> <p>1 What I don't know is whether in 2 the data that I get, is that still one row of 3 data or is three rows of data. The way the 4 data is given to us it is not duplicate. As 5 long as the dates are different that 6 automatically is not clean. So it would remain 7 in our data. What I don't know is if the way 8 the jail docket generates this data set is if 9 it treats it as one row of data. I would not 10 do anything to remove the latter in your 11 hypothetical example.</p> <p>12 Q. Because they had different dates? 13 A. Correct.</p> <p>14 Q. Don't you think in assessing 15 whether the data that you were working with was 16 being interpreted correctly you should have 17 asked the question whether the jail docket is 18 linked back to the original incident? 19 MS. SIVASHANKER: Objection to 20 form. He is here as a summary declarant 21 but he can go ahead and answer. 22 A. When I was given the data, back to 23 3A, all individuals arrested by MCSO and again 24 it is the level at which you choose to do the 25 analysis. I mean a row of data refers to an</p>	<p style="text-align: right;">Page 116</p> <p>1 various means. I believe what I said and we 2 can go back to the court reporter is what I 3 said is that it is neither necessary nor 4 feasible to go back and check as to sort of 5 manually how a particular data set was created. 6 I mean that is just not standard practice in a 7 wide variety of situations.</p> <p>8 Q. Would it have been feasible with 9 the Madison County Sheriff's Department data to 10 figure out whether a separate entry is made for 11 each arrest that may occur as the person goes 12 through the judicial process? 13 MS. SIVASHANKER: Objection to 14 form. 15 A. I don't know the answer to that. 16 Q. Now, I want to be clear on this. 17 If I get pulled over and I'm arrested for 18 reckless driving, possession of marijuana, not 19 having a license -- if I get pulled over and 20 I'm arrested and I'm charged with multiple 21 offenses, did you treat that as one arrest or 22 multiple arrests? 23 MS. SIVASHANKER: Objection to 24 form. 25 A. Multiple.</p>
<p style="text-align: right;">Page 115</p> <p>1 arrest and the data that I'm summarizing is 2 simply all of the arrests that you see in that 3 particular data set what is the breakdown by 4 race.</p> <p>5 Q. So if there were three arrests all 6 relating to the same underlying offense but 7 different dates because they were at different 8 stages in the judicial process, you would treat 9 that as three separate arrests? 10 MS. SIVASHANKER: Objection to 11 form. 12 A. If that is how the data were 13 created, yes.</p> <p>14 Q. You mentioned data kept by the New 15 York Stock Exchange, do you remember that part 16 of your testimony. What is the basis for 17 thinking that data kept by the New York Stock 18 Exchange is analogous to arrest data entered by 19 people at the Madison County Sheriff's 20 Department's office? 21 MS. SIVASHANKER: Objection to 22 form. 23 A. I don't believe I said that it was 24 analogous. What I was trying to explain is 25 that various data sets are generated through</p>	<p style="text-align: right;">Page 117</p> <p>1 Q. Multiple? 2 A. Yes. 3 Q. Because it was different offense 4 codes, right? 5 MS. SIVASHANKER: Objection to 6 form. 7 A. That's correct. As I say in 8 paragraph 10, "Thus, if an individual is arrested 9 and charged with three unique offenses on one 10 day, I count those arrests as three separate 11 arrests." 12 Q. So it's me, one person, I get 13 arrested one time but I get charged with 14 multiple offense codes, you say that I got 15 arrested three or four times? 16 MS. SIVASHANKER: Objection to 17 form. 18 A. That's exactly -- that's what's 19 said. The reason for doing that is my task 20 here is to do some calculation and summarize 21 the data and in the process of doing that I 22 want to make as few assumptions as possible. 23 So for example, let's say in the 24 morning you were arrested for reckless driving 25 and you were let go and later at night you were</p>

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<p>1 arrested for driving under the influence. 2 Right. Now that is two different arrests. Now 3 I think you could have an example where a 4 person was arrested and charged with two 5 different things, as you said the offense code 6 is different. 7 My task was to summarize and do 8 calculations, make as few assumptions as 9 possible. 10 Q. And in that latter situation you 11 treated it if I was charged with three things 12 you would count it is a three separate arrests? 13 A. In both the situation, the one in 14 which you were arrested in the morning and late 15 at night and the second example both are 16 treated as two separate arrests. The reason is 17 as given in my capacity of summarizing and 18 doing these calculations, my objective was to 19 sort of make as few assumptions as possible. 20 And simply do the calculation and therefore 21 there is no way to tell the difference between 22 those two examples. I treated them as 23 different arrests. 24 Q. I just want to be clear on this 25 and I think we are clear. I'm not badgering</p>	<p>1 speeding they get me driver's license and call 2 it in to dispatch and find out that there is an 3 outstanding warrant for burglary. And they 4 arrest me for speeding and they also charge me -- 5 they arrest me based upon the outstanding 6 warrant but not the speeding. You would count 7 that as an arrest in Madison County, right? 8 MS. SIVASHANKER: Objection to 9 form. 10 A. That's correct. 11 Q. Even though it is based upon a 12 warrant where I may have been arrested before, 13 right? 14 A. I mean that would show up. For 15 example in Appendix B there is a row called 16 burglary, because that is an offense code, so 17 it would show up under the burglary row and it 18 would show up under the speeding row. 19 Q. But I didn't get arrested for 20 speeding. I had been previously arrested for 21 burglary, got bonded out, I didn't show up, 22 they issued a warrant and I got pulled over for 23 speeding and then I got arrested on that 24 warrant. You would show two arrests, right? 25 MS. SIVASHANKER: Objection to</p>
Page 119	Page 121
<p>1 you, but if I'm arrested at a house at nine 2 o'clock at night on Monday and I'm charged with 3 sexual battery, burglary and a probation 4 violation and in your summary that is going to 5 be three separate arrests? 6 MS. SIVASHANKER: Objection to 7 form. 8 A. I believe so. 9 Q. Let's go to paragraph 9 of your 10 declaration. You talk about removing duplicates 11 based upon a combination of name, race, sex, 12 date and offense code. I think you already 13 answered this, but did your arrest -- did your 14 summary of the arrest data take into account in 15 any way an arrest based upon an outstanding 16 warrant? 17 MS. SIVASHANKER: Objection to 18 form. 19 A. I'm looking at Appendix B because 20 if that shows up as a separate offense code it 21 should be there in Appendix B but I don't 22 remember that off the top of my head. 23 Q. Let's me give you a hypothetical. 24 Let's say that I'm pulled over for speeding in 25 Madison County. When they pull me over for</p>	<p>1 form. 2 A. No, it won't. You just said you 3 weren't arrested for speed, if you didn't get 4 arrest for speeding there is no row of data in 5 there. 6 Q. Okay, there would be a row of data 7 when I got arrested initially for the burglary 8 and there would be a row of data for when I got 9 arrested based upon the outstanding warrant, 10 right? 11 MS. SIVASHANKER: Objection to 12 form. 13 A. No, there would be one row of 14 data. It depends if you got pulled over and 15 got arrested because somebody discovered that 16 you have an outstanding warrant for burglary, 17 that is one row of data. Right, an example of 18 when there would be two rows of data is let's 19 say you're speeding a long while smoking 20 marijuana and it is possible that you got 21 arrested and there are two offense codes. 22 That's the distinction in your example when I'm 23 pulled over but not arrested but somebody 24 discovers there is an outstanding warrant for 25 burglary, that is one row of data not two.</p>

31 (Pages 118 to 121)

<p style="text-align: right;">Page 122</p> <p>1 Q. Your data does not indicate which 2 of the arrests were pursuant to a warrant or 3 based upon a current violation, right? 4 MS. SIVASHANKER: Objection to 5 form. It was not your data but you can 6 answer. 7 A. So, I'm not sure that it 8 identifies the process, but to the extent that 9 the existing -- preexisting offense leads to an 10 arrest, that is a row of data. It does show up 11 if you look at Appendix B every single offense 12 code will eventually show up. 13 Q. Let's go to Appendix B. Go to the 14 first page which I think is 1 of 12 and look at 15 the third one down, the control substance 16 violation and you have 1,867 arrests there. Do 17 you know how many of those were pursuant to a 18 warrant and how many of those were based upon 19 the officer smelling marijuana -- the officer 20 seeing a controlled substance on the scene when 21 he made the arrest? 22 MS. SIVASHANKER: Objection to 23 form. 24 A. No. 25 Q. The same would be true for every</p>	<p style="text-align: right;">Page 124</p> <p>1 form. 2 A. No, I believe I answer that, that 3 is not a calculation that I performed. 4 Q. Do you know or did you do any 5 calculation with regard to Exhibit B as to 6 which of the arrests reflected in Exhibit B 7 were arrests pursuant to an indictment as 8 opposed to arrests that were not pursuant to an 9 indictment? 10 MS. SIVASHANKER: Objection to 11 form. To clarify we are looking at 12 Appendix B? 13 MR. ROSS: I'm sorry, right, 14 Appendix B. 15 A. Would you repeat the question one 16 more time? 17 Q. Yes. With regard to the arrests 18 in Appendix B which is entitled summary of 19 arrests by offense codes, did you do any 20 analysis of which of those arrests or how many 21 of those arrests were pursuant to an indictment 22 as opposed to not being pursuant to an 23 indictment? 24 MS. SIVASHANKER: Objection to 25 form.</p>
<p style="text-align: right;">Page 123</p> <p>1 category in Appendix B, right? 2 MS. SIVASHANKER: Objection to 3 form. 4 A. I'm not sure that I understand 5 what the question means? Can you take another 6 row and ask a specific question? 7 Q. Let's say I'm on page 2 of 12 this 8 time. 9 A. Okay. 10 Q. Let's say aggravated assault, 11 offense code is 9737 (2) and you have 119 arrests. 12 Do you know how many of those arrests were 13 pursuant to a warrant and how many of them were 14 based upon the officer seeing an assault in 15 progress? 16 MS. SIVASHANKER: Objection to 17 form. 18 A. No I don't. 19 Q. With regard to Exhibit B, and 20 Exhibit B I think is a summary of arrests by 21 offense codes, do you have any idea -- let me 22 put it this way. Do you have any idea of what 23 percent of arrests in Madison County end up 24 with guilty pleas or convictions? 25 MS. SIVASHANKER: Objection to</p>	<p style="text-align: right;">Page 125</p> <p>1 A. I have not performed that 2 calculation. 3 Q. With regard to Appendix B, let's 4 look at page 1, you see simple domestic 5 violence down about halfway, offense code 9737 6 (3)? 7 A. Yes, I do. 8 Q. There were 399 total arrests, do 9 you know what percentage of those 399 arrests 10 were the result of a call for assistance from a 11 person in Madison County and the sheriff's 12 department responded as opposed to arrests just 13 made because the sheriff's department saw 14 something happen? 15 MS. SIVASHANKER: Objection to 16 form. 17 A. I have not done that calculation. 18 Q. You haven't done that calculation 19 for any of the offense codes listed in Appendix B as far 20 as what percentage of them were the result of a 21 call from a citizen as opposed to the sheriff's 22 department just observing something happening, 23 right? 24 MS. SIVASHANKER: Objection to 25 form.</p>

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<p style="text-align: right;">Page 126</p> <p>1 A. I'm not sure whether that</p> <p>2 experiment that you articulated applies to all</p> <p>3 of these offense codes, but as a general matter</p> <p>4 I would agree with you that for the most part</p> <p>5 there isn't anything in the data to allow you</p> <p>6 to differentiate between whether an officer saw</p> <p>7 that or whether somebody reported it. But I'm</p> <p>8 not sure it applies to every single row. Like</p> <p>9 for example there is something called fraud</p> <p>10 credit card, what would it even mean for</p> <p>11 somebody to -- I don't know.</p> <p>12 Q. Do you know what Canton Estates</p> <p>13 is?</p> <p>14 A. I do not.</p> <p>15 MS. SIVASHANKER: Objection to</p> <p>16 form.</p> <p>17 Q. If there is an apartment complex</p> <p>18 in Madison County that is 99 percent to 100</p> <p>19 percent African American as far as the makeup</p> <p>20 of the residents and a resident calls the</p> <p>21 Madison County Sheriff's Department and says</p> <p>22 there are people doing drugs outside my</p> <p>23 apartment. You would agree that the Madison</p> <p>24 County Sheriff's Department should respond to</p> <p>25 that call, right?</p>	<p style="text-align: right;">Page 128</p> <p>1 any offense code where the Madison County</p> <p>2 Sheriff's Department received a call, you did</p> <p>3 not take that into account in Appendix B, did</p> <p>4 you?</p> <p>5 MS. SIVASHANKER: Objection to</p> <p>6 form.</p> <p>7 A. That is not what Appendix B is.</p> <p>8 As I said Appendix B --</p> <p>9 Q. Is your answer yes or no and then</p> <p>10 you can explain?</p> <p>11 A. I can't answer it yes or no unless</p> <p>12 the question sort of --</p> <p>13 Q. For any offense code listed in</p> <p>14 Appendix B, did you take into account the</p> <p>15 percentage of the arrests that were a result of</p> <p>16 a call in as opposed to the sheriff's deputy</p> <p>17 just observing something when they were out and</p> <p>18 about?</p> <p>19 MS. SIVASHANKER: Objection to</p> <p>20 form. I think he answered.</p> <p>21 A. I think I answered the question.</p> <p>22 That is not what that analysis is. I explained</p> <p>23 to you what a row of data is, it is data, name,</p> <p>24 sex, race, an offense code. That is what is</p> <p>25 being circulated here.</p>
<p style="text-align: right;">Page 127</p> <p>1 MS. SIVASHANKER: Objection to</p> <p>2 form.</p> <p>3 A. I don't have a view on that.</p> <p>4 Q. Well if they did respond you</p> <p>5 wouldn't think that was racially motivated,</p> <p>6 would you?</p> <p>7 MS. SIVASHANKER: Objection to</p> <p>8 form.</p> <p>9 A. I have no view on that nor have I</p> <p>10 offered a view on that in my declaration.</p> <p>11 Q. And you have no idea how many</p> <p>12 arrests in Madison County are the results of</p> <p>13 citizen calls as opposed to the officer just</p> <p>14 seeing something happening?</p> <p>15 MS. SIVASHANKER: Objection to</p> <p>16 form.</p> <p>17 A. Again, I think I would prefer it</p> <p>18 if we can go down sort of each of these offense</p> <p>19 codes in Appendix B and I prefer to answer</p> <p>20 specific questions by each offense code because</p> <p>21 I don't know whether that generalization</p> <p>22 applies to every single offense code but I'm</p> <p>23 happy to engage in that part of the experiment</p> <p>24 for each of the offense codes.</p> <p>25 Q. Maybe we can shorten this. For</p>	<p style="text-align: right;">Page 129</p> <p>1 Q. And that row of data does not</p> <p>2 indicate whether it's a result of a citizen</p> <p>3 call or not, right?</p> <p>4 MS. SIVASHANKER: Objection to</p> <p>5 form.</p> <p>6 A. That's correct.</p> <p>7 Q. You did not go back and look at</p> <p>8 underlying incident reports to determine if it</p> <p>9 was a result of a citizen call, did you?</p> <p>10 A. I did not.</p> <p>11 MR. ROSS: It's twelve o'clock. Do</p> <p>12 you want to take a break for lunch.</p> <p>13 MS. SIVASHANKER: Sure.</p> <p>14 (Lunch recess taken at 12:06 p.m.)</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>

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<p>1 AFTERNOON SESSION</p> <p>2 12:56 p.m.</p> <p>3 RAHUL K. GUHA, PH.D,</p> <p>4 resumed, having been previously duly sworn,</p> <p>5 was examined and testified further as</p> <p>6 follows:</p> <p>7 BY MR. ROSS:</p> <p>8 Q. Dr. Guha, you testified as an</p> <p>9 expert in other cases, right?</p> <p>10 A. I have.</p> <p>11 Q. And in those cases you prepared</p> <p>12 expert reports, right?</p> <p>13 A. That's correct.</p> <p>14 Q. But you call this a declaration</p> <p>15 because you're not testifying as an expert</p> <p>16 according to my understanding; is that right?</p> <p>17 MS. SIVASHANKER: Objection to</p> <p>18 form.</p> <p>19 A. That's correct.</p> <p>20 Q. Because you're not testifying as</p> <p>21 an expert you're not offering an opinion as to</p> <p>22 the significance of your summaries or</p> <p>23 calculations contained in your declaration,</p> <p>24 Exhibit 3, right?</p> <p>25 MS. SIVASHANKER: Objection to form</p>	<p>1 that had to do with how an economist would</p> <p>2 interpret the terms of a contract. That was</p> <p>3 the part that the judge said that the jury is</p> <p>4 better relying on the plain English</p> <p>5 interpretation of what the contract means.</p> <p>6 Q. Is that testimony reflected in</p> <p>7 Exhibit 2?</p> <p>8 A. Yes, it is.</p> <p>9 Q. Which one is it?</p> <p>10 A. The one at the bottom of 3.</p> <p>11 Elorac, Inc., versus Sanofi-Aventis Canada Inc.</p> <p>12 Q. Who were you retained by, Elorac</p> <p>13 Inc. or the other party?</p> <p>14 A. Sanofi.</p> <p>15 Q. Who was the attorney for Sanofi,</p> <p>16 do you know?</p> <p>17 A. Yes I do. DLA Piper.</p> <p>18 Q. DLL Piper?</p> <p>19 A. DLA Piper. Do you what the</p> <p>20 specific attorney's name?</p> <p>21 Q. Yes.</p> <p>22 A. Christopher Strongosky.</p> <p>23 Q. Is he here in New York City</p> <p>24 A. He is.</p> <p>25 Q. Who is the attorney for or the law</p>
Page 131	Page 133
<p>1 A. No, again, I think the issue I had</p> <p>2 with that is I'm not sure what you meant by</p> <p>3 significance in Exhibit 3.</p> <p>4 Q. Well, let me ask you another way.</p> <p>5 You're not offering any opinion that your</p> <p>6 declaration is indicative of a policy or</p> <p>7 procedure of the Madison County Sheriff's</p> <p>8 Department, are you?</p> <p>9 MS. SIVASHANKER: Objection to</p> <p>10 form.</p> <p>11 A. No, I don't believe I have offered</p> <p>12 that opinion.</p> <p>13 Q. Now, have you ever not been -- in</p> <p>14 cases where you have been proffered as an</p> <p>15 expert, have you ever not been accepted by a</p> <p>16 court as an expert?</p> <p>17 A. There is one case in which of</p> <p>18 several opinions that I offered one opinion was</p> <p>19 deemed by a judge not to be useful for a jury.</p> <p>20 But of all cases that I testified that's the</p> <p>21 one that I'm aware of.</p> <p>22 Q. What case was that?</p> <p>23 A. It was a breach of contract matter</p> <p>24 and the issues had to do with damages, rebuttal</p> <p>25 damages, but there was a part of the opinion</p>	<p>1 firm for Elorac, Inc.?</p> <p>2 A. I don't remember.</p> <p>3 Q. You don't remember the law firm?</p> <p>4 A. I don't.</p> <p>5 Q. Have you ever had an opinion</p> <p>6 deemed unreliable by a court?</p> <p>7 MS. SIVASHANKER: Objection to</p> <p>8 form.</p> <p>9 A. No.</p> <p>10 Q. Now, we have talked about the data</p> <p>11 and we talked about how Simpson Thacher, I</p> <p>12 believe I'm characterizing this correctly, told</p> <p>13 you to look at area 1, 2 and 3, arrest,</p> <p>14 citation an then in area 3 be subsets; is that</p> <p>15 correct?</p> <p>16 MS. SIVASHANKER: Objection to</p> <p>17 form.</p> <p>18 A. Area 3 being what?</p> <p>19 Q. It was Simpson Thacher who came up</p> <p>20 with the idea of you looking at summary one,</p> <p>21 summary 2 and summary 3 as reflected in</p> <p>22 paragraph 3 of your declaration, right?</p> <p>23 MS. SIVASHANKER: Objection to</p> <p>24 form.</p> <p>25 A. That's correct.</p>

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<p style="text-align: right;">Page 134</p> <p>1 Q. Did you make any determination as 2 to the most salient aspects of the data that 3 you reviewed or did you just rely upon Simpson 4 Thacher? 5 MS. SIVASHANKER: Objection to 6 form. 7 A. No, I was asked to summarize 8 these three types of data or these three -- it 9 is more than three data sets, but these three 10 categories of data and that is what I did in 11 this declaration. 12 Q. You made no individual 13 determination as to some other aspect of the 14 data that might be significant? 15 MS. SIVASHANKER: Objection to 16 form. 17 A. No, that was not a question that I 18 was asked to address. And with the caveat that 19 I'm not, again, I'm not sure what you mean by 20 significant. 21 Q. Now, let's go to Appendix B of 22 your declaration. Page 1. You see down at the 23 bottom probation violation offense code is 24 47737? 25 A. Yes, I do.</p>	<p style="text-align: right;">Page 136</p> <p>1 on parole is as compared to non-African 2 Americans? 3 MS. SIVASHANKER: Objection to 4 form. 5 A. No, I don't do that. This is a 6 conditional calculation, this is saying conditional on 7 being arrested for a parole violation, what 8 percent are black versus non-black. 9 Q. You would agree that to understand 10 whether 72 percent black arrests for parole 11 violations is meaningful you would have to know 12 the percentage of blacks on parole as opposed 13 to non-blacks on parole, right? 14 MS. SIVASHANKER: Objection to 15 form. 16 A. No, I wouldn't agree with that. 17 Q. You did not take the population of 18 African Americans on parole as opposed to 19 non-African Americans on parole, you did not 20 take it into account in your declaration, 21 right? 22 MS. SIVASHANKER: Objection to 23 form. 24 A. You know, I think I answered that 25 before. This is a conditional calculation. I</p>
<p style="text-align: right;">Page 135</p> <p>1 Q. According to your calculations, 78 2 percent of the arrests for probation violations 3 were by African Americans, right? 4 MS. SIVASHANKER: Objection to 5 form. 6 A. That's what the road shows. 7 Q. Do you know how many African 8 Americans as opposed to non-African Americans 9 are on probation? 10 MS. SIVASHANKER: Objection to 11 form. 12 A. No, that is not a calculation that 13 I have done. 14 Q. The same thing with parole, do you 15 know how many African Americans as opposed to 16 non-African Americans are on parole? 17 MS. SIVASHANKER: Objection to 18 form. 19 A. Are you referring to a particular 20 offense code for parole violation. 21 Q. Yes, go to 412 of Appendix B. The 22 second item, offense code 47727, you indicate 23 that the black percentage of people arrested 24 for parole violation is 72 percent. Do you 25 know what the percentage of African Americans</p>	<p style="text-align: right;">Page 137</p> <p>1 think this is saying conditional on being 2 arrested for parole violation, what is the 3 percent like that you're black versus 4 non-blacks. It is a conditional calculation, 5 it's conditional on being arrested. 6 Q. If the percentage of African 7 Americans on parole is significantly higher 8 than the percentage of non-African Americans on 9 patrol, would you expect to see a higher 10 percentage of arrests for parole violations by 11 African Americans, right? 12 MS. SIVASHANKER: Objection to 13 form. 14 A. That is absolutely not correct. 15 Q. Why is that not correct? 16 A. It is a conditional calculation. 17 The fact that there would be a larger 18 population of African Americans on parole is 19 irrelevant. It is conditional on being arrested, 20 what is the distribution. 21 Q. And you do not take into account 22 the population of people, the racial breakdown 23 of the population of people eligible to be 24 arrested for a certain offense in your 25 declaration?</p>

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<p style="text-align: right;">Page 138</p> <p>1 MS. SIVASHANKER: Objection to 2 form. 3 A. For the conditional calculation it 4 as an irrelevant question. This is a conditional 5 calculation. Conditional on being arrested, 6 what is the distribution by race. 7 Q. And not taking anything else into 8 account, right? 9 MS. SIVASHANKER: Objection to 10 form. 11 A. I think I have answer that before. 12 It is an irrelevant question for the conditional 13 calculation. 14 Q. In your conditional calculation 15 are you taking into account anything other than 16 the percentage of blacks versus the percentage 17 of whites arrested? 18 MS. SIVASHANKER: Objection to form 19 I think he answered. 20 THE WITNESS: Sir, can you read my 21 previous answer? 22 (Requested portion of record read.) 23 Q. Is your conditional calculation 24 based upon anything other than the race of the 25 person being arrested?</p>	<p style="text-align: right;">Page 140</p> <p>1 MS. SIVASHANKER: Objection to 2 form. 3 A. It is not -- it is not my term. 4 Q. That is the term that you used 5 right? 6 A. Fair enough. 7 Q. You're the first one that 8 introduced that term, right? 9 A. In this conversation? 10 Q. Yes. 11 A. Yes. 12 Q. What are your arrest figures for 13 parole violations conditioned on, if anything, 14 other than the race of the person arrested? 15 MS. SIVASHANKER: Objection to 16 form. Again, this is asked and answered. 17 A. And that question makes no sense 18 to me. It is not conditioned on race. You can 19 read -- it is not conditioned on race. I'm 20 trying to explain for the sixth time now what a 21 row in this appendix means. It says the 22 offense is parole violation, it means that 23 given that that is the offense, what is the 24 distribution by race. It is not conditioned on 25 race. Given the offense, that is the condition,</p>
<p style="text-align: right;">Page 139</p> <p>1 MS. SIVASHANKER: Objection to form 2 . 3 A. I will say this, this is a 4 conditional calculation. It is conditional on 5 being arrested for a parole violation, what is 6 the distribution by race. 7 Q. And that was the extent of your 8 conditions, right? 9 MS. SIVASHANKER: Objection to form 10 asked and answered. 11 A. It has been asked and answered. I 12 can ask him to read it back. 13 Q. Is that the extent of your 14 conditions? You're arrested and whether you're 15 black or white, that is my simple question. 16 MS. SIVASHANKER: Objection to 17 form. 18 Q. You're the one that used the term 19 conditional. 20 A. I think I gave you an equally 21 simple answer. 22 Q. Let me ask my question a different 23 way. You used the term conditional? 24 A. Yes. 25 Q. That is your term, right?</p>	<p style="text-align: right;">Page 141</p> <p>1 what is the distribution. 2 Q. And that's as far as your inquiry 3 goes, distribution by race, right? 4 MS. SIVASHANKER: Objection to 5 form, asked and answered. 6 A. That's what I said, yes. 7 Q. I want to go to Exhibit 9 again of 8 your declaration. I think Exhibit 9 was the 9 exhibit that you said that you or others at 10 Cornerstone looked at the actual incident 11 reports; is that correct? 12 MS. SIVASHANKER: Objection to 13 form. 14 A. Yes, that's correct. 15 Q. Are there any other exhibits where 16 you looked at the actual incident report in 17 order to select the ones that you thought were 18 relevant? 19 MS. SIVASHANKER: Objection to 20 form. 21 A. There are two other exhibits that 22 are related to incident reports. 6, 7, 8. Those three 23 exhibits don't involve any manual review. 24 Q. So Exhibit 6, 7 and 8 you did not 25 do any manual review, did I understand you</p>

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<p style="text-align: right;">Page 142</p> <p>1 correctly?</p> <p>2 A. That's correct.</p> <p>3 Q. But Exhibit 9 you did; is that</p> <p>4 correct?</p> <p>5 A. Yes.</p> <p>6 Q. Did you segregate those into a</p> <p>7 separate computer file? How could I figure out</p> <p>8 which ones based upon your manual review you</p> <p>9 thought fell in the category of relevant</p> <p>10 arrests for Exhibit 9?</p> <p>11 MS. SIVASHANKER: Objection to</p> <p>12 form.</p> <p>13 A. So I think if you follow the</p> <p>14 instructions in footnote 1, so if you use the</p> <p>15 search term seat belt or seatbelt or safety</p> <p>16 belt or buckle and identify the ones that have</p> <p>17 led to an arrest, that's the set that if you</p> <p>18 applied the same criteria you will get the</p> <p>19 exact same documents that I looked at and then</p> <p>20 you can look at that manually.</p> <p>21 Q. So it says "The search resulted in</p> <p>22 574 incident reports." I understand that.</p> <p>23 A. Correct.</p> <p>24 Q. The incident reports were then</p> <p>25 parsed programmatically, what do you mean by</p>	<p style="text-align: right;">Page 144</p> <p>1 Q. If you know.</p> <p>2 A. Absolutely. It just means that,</p> <p>3 you know, once you have an incident report you</p> <p>4 need to go from the incident reports to how</p> <p>5 many people were arrested. And what this is</p> <p>6 doing is it is programmatically going through</p> <p>7 each of the incident reports and identifying</p> <p>8 how many arrests were made in each individual</p> <p>9 report. Does that make sense?</p> <p>10 Q. I think so. When it says -- I'm</p> <p>11 not sure. When it says parsed programmatically</p> <p>12 that implies to me something other than a</p> <p>13 manual review?</p> <p>14 MS. SIVASHANKER: Objection to</p> <p>15 form.</p> <p>16 A. The parsed programmatic gets you</p> <p>17 from -- let me try again. There are 574 incident</p> <p>18 reports, right?</p> <p>19 Q. Right.</p> <p>20 A. Then it says, "The incident</p> <p>21 reports were then parsed programmatically, the</p> <p>22 parsed results contain 856 observations</p> <p>23 corresponding to individuals or entities listed</p> <p>24 in the person section in the incident report."</p> <p>25 So the parsing programmatically</p>
<p style="text-align: right;">Page 143</p> <p>1 that?</p> <p>2 A. When you use the four terms that I</p> <p>3 use you get 574 incident reports. Now --</p> <p>4 Q. And those were the number -- I'm</p> <p>5 interrupting, I'm sorry. That is the number of</p> <p>6 incident reports that you manually reviewed,</p> <p>7 right?</p> <p>8 A. Yes.</p> <p>9 Q. What does that next sentence mean,</p> <p>10 parsed programmatically?</p> <p>11 A. I think this just says that we</p> <p>12 also parsed it to identify like which -- how</p> <p>13 many arrests were there in 574 incident</p> <p>14 reports. Because there are some incident</p> <p>15 reports that have morning one person being</p> <p>16 arrested. So just to back up. Given these</p> <p>17 were ultimately read manually we didn't</p> <p>18 actually need to do that.</p> <p>19 Q. What does it mean -- your report</p> <p>20 says that those incident reports, the 574 were</p> <p>21 parsed programmatically, I want to know what</p> <p>22 that means?</p> <p>23 MS. SIVASHANKER: Objection to</p> <p>24 form.</p> <p>25 A. So --</p>	<p style="text-align: right;">Page 145</p> <p>1 gets you from the 574 incident reports to how</p> <p>2 many people were actually arrested.</p> <p>3 Q. I'm simply asking, what was the</p> <p>4 process by which Cornerstone, quote, parsed</p> <p>5 programmatically the 574 incident reports?</p> <p>6 MS. SIVASHANKER: Objection to</p> <p>7 form.</p> <p>8 A. So what the program does is</p> <p>9 imagine an incident report that is a piece of</p> <p>10 paper, the program starts reading this piece of</p> <p>11 paper and as I have said, I have seen an</p> <p>12 incident report, there are things like person</p> <p>13 arrested. If the person arrested has just one</p> <p>14 name it says in this incident report there is</p> <p>15 just one person arrested.</p> <p>16 Then it goes to the next incident</p> <p>17 report, it reads it programmatically and in that</p> <p>18 incident report it sees there were two people</p> <p>19 arrested. So it outputs two arrests. So what</p> <p>20 the program does is, it automates the process</p> <p>21 of counting the number of incident reports to</p> <p>22 the number of people that were actually</p> <p>23 arrested. Which is why you see the difference</p> <p>24 that there are 574 incident reports but 856</p> <p>25 observations corresponding to individuals or</p>

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<p style="text-align: right;">Page 146</p> <p>1 entities listed in the person section of the</p> <p>2 incident report.</p> <p>3 Q. So where does the manual review</p> <p>4 come in? After you have identified all the individuals,</p> <p>5 arrested in the 574 incident reports by parsing</p> <p>6 that programmatically, then you do the manual</p> <p>7 review?</p> <p>8 A. Of the 574. We go back to the 574</p> <p>9 pieces of paper or a couple of pieces of paper</p> <p>10 for each and you read each of them.</p> <p>11 Q. What is the purpose in parsing</p> <p>12 programmatically?</p> <p>13 A. I'm not sure particularly it</p> <p>14 matters for this particular exhibit. For other</p> <p>15 ones it does. That's why we kind of probably</p> <p>16 ran the same program for this exhibit as well.</p> <p>17 Q. On Exhibit 9 you say there were</p> <p>18 102 arrests that were from incident reports</p> <p>19 related to traffic stops initiated for a</p> <p>20 seatbelt violation only. Did you segregate the</p> <p>21 incident reports pertaining to those 102</p> <p>22 arrests so that we could go back and look at</p> <p>23 them?</p> <p>24 A. Yes. I believe those are in the</p> <p>25 production materials that I turned over.</p>	<p style="text-align: right;">Page 148</p> <p>1</p> <p>2 Q. Go to page 13 of your report,</p> <p>3 please. Paragraph 13, sorry. It is referring</p> <p>4 to Exhibit 2 and Exhibit 2 is limited to offense code</p> <p>5 in the direct arrest data that had more than</p> <p>6 100 arrests. Why did you pick the number 100</p> <p>7 for Exhibit 2?</p> <p>8 A. No particular reason. Every</p> <p>9 single offense code is listed in Appendix B.</p> <p>10 Now, the objective of Exhibit 2 is to demonstrate</p> <p>11 the data in a visual manner and obviously you</p> <p>12 can't have 250 of these so you have to have a</p> <p>13 cutoff and 100 seemed to be just looking at how</p> <p>14 many offenses there are, 100 seemed to be a</p> <p>15 standard cut off.</p> <p>16 Q. Who came up with that cut off,</p> <p>17 Cornerstone or Simpson Thacher?</p> <p>18 MS. SIVASHANKER: Objection to</p> <p>19 form.</p> <p>20 A. No, I did.</p> <p>21 Q. Go to paragraph 15 of your</p> <p>22 declaration. This deals with what you call the</p> <p>23 "Racial profile of the arrested population as a</p> <p>24 ratio of the residential population of Madison</p> <p>25 County."</p>
<p style="text-align: right;">Page 147</p> <p>1 MR. ROSS: Are they in the</p> <p>2 production?</p> <p>3 MR. NOBILE: I don't see them.</p> <p>4 MS. SIVASHANKER: I'm pretty sure</p> <p>5 those are in the production materials.</p> <p>6 MR. NOBILE: It is possible that</p> <p>7 they are in there but I don't see it right</p> <p>8 now.</p> <p>9 MR. ROSS: If they are they are,</p> <p>10 but if they are not we will request them.</p> <p>11 MS. SIVASHANKER: Take it under</p> <p>12 advisement.</p> <p>13 MR. NOBILE: Obviously for those we</p> <p>14 have to be able to verify the data that he</p> <p>15 is attempting to clarify.</p> <p>16 MS. SIVASHANKER: I will point out</p> <p>17 here I think the source here might be</p> <p>18 helpful to you because it list the Bates</p> <p>19 numbers.</p> <p>20 MR. NOBILE: It is Bates numbers 1</p> <p>21 through 59,000. I know you're not being</p> <p>22 argumentative, that is obviously the</p> <p>23 problem.</p> <p>24</p> <p>25 COUNSEL REQUESTS FOR INFORMATION</p>	<p style="text-align: right;">Page 149</p> <p>1 Tell me how you did that</p> <p>2 computation for the arrest data?</p> <p>3 A. So as is described in 15, you take</p> <p>4 the number of arrests for each offense code and</p> <p>5 you divide it by the black population in</p> <p>6 Madison County. And the number for the black</p> <p>7 population for Madison County comes from the</p> <p>8 U.S. census date which reports the total</p> <p>9 population of Madison County and the proportion</p> <p>10 of the population that is black. So multiplying</p> <p>11 those two figures gives you the number of black</p> <p>12 people in that -- in Madison County.</p> <p>13 So all you're doing is you're</p> <p>14 dividing the number of arrests for offense code</p> <p>15 divided by the black community. That's the per</p> <p>16 capita arrests for blacks and you can do a</p> <p>17 similar calculation for whites and you can</p> <p>18 calculate the per capita number for whites and</p> <p>19 then you can look at how they compare.</p> <p>20 Q. Well, I misunderstood then. I</p> <p>21 thought you were like for blacks you were doing</p> <p>22 the number of blacks arrested divided by the</p> <p>23 number of blacks in Madison County, am I wrong?</p> <p>24 MS. SIVASHANKER: Objection to</p> <p>25 form.</p>

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<p style="text-align: right;">Page 150</p> <p>1 A. That's correct, that's what I 2 said. I'm sorry, maybe I miss -- so it is the 3 number of blacks arrested divided by the total 4 number of blacks in the county. 5 Q. Where did you come up with this 6 concept? Did Simpson Thacher ask you to do 7 that? 8 MS. SIVASHANKER: Objection to 9 form. 10 A. No. 11 Q. Did you decide to do it on your 12 own? 13 A. Yes. It's a fairly standard way 14 of looking or presenting data. 15 Q. You have you seen that in any 16 literature relating to law enforcement? 17 MS. SIVASHANKER: Objection to 18 form. 19 A. As I said, I don't do law 20 enforcement, but this is a very standard way of 21 looking at it. 22 Q. Is your answer no? 23 A. In law enforcement? 24 Q. Right. 25 A. No.</p>	<p style="text-align: right;">Page 152</p> <p>1 scoring 30 points a game. So it is just 2 normalizing things so two things become 3 comparable. That's all this is. 4 Q. This goes a back to another 5 question that I have previously, as I 6 understand the way that you computed your 7 "Racial profile" was the number of blacks 8 arrested divided by the number of blacks in 9 Madison County; is that correct? 10 MS. SIVASHANKER: Objection to 11 form. 12 A. That's correct. 13 Q. An of course, you have already 14 testified that you don't know that how many of 15 the blacks arrested actually lived in Madison 16 County, right? 17 MS. SIVASHANKER: Objection to 18 form. 19 A. That's correct, yes. 20 Q. Turn to Appendix B, page 8 of 12. 21 First of all before we go to Page 8. Let's 22 look at Appendix B in general? 23 A. I'm sorry, where do you want me to 24 look at Appendix B? 25 Q. Page 1 of Appendix B.</p>
<p style="text-align: right;">Page 151</p> <p>1 MR. ROSS: Off the record for a 2 moment. 3 (Recess taken.) 4 BY MR. ROSS: 5 Q. This racial profile which we were 6 just discussing, you said it was a standard way 7 of looking at data. 8 A. That's correct. 9 Q. Do you have an opinion on that? 10 MS. SIVASHANKER: Objection to 11 form. 12 A. I mean it is just -- I'm saying 13 this is a -- this is a very common way with 14 which people look at data. There is nothing 15 particularly like special to this. And the 16 example that I was about to give you is if 17 somebody were to ask you, you know, who is 18 scoring more this year in the NBA, Steph Curry 19 or LeBron James, the answer wouldn't be well, 20 LeBron got 3000 points and Steph Curry got 2000 21 points. That makes no sense because you don't 22 know how many games each one of them has 23 played. Right. 24 So you always say, okay, Steph 25 Curry is scoring 35 points a game and LeBron is</p>	<p style="text-align: right;">Page 153</p> <p>1 A. Okay. 2 Q. You got a category out there, "per 3 capita ratio of black to non-black." Explain 4 that to me. 5 A. So, it's black arrests divided by 6 black population, that's per capita arrest rate 7 of blacks. White arrests divided by white 8 population, the per capita ratio is the ratio -- is the 9 ratio of those two numbers. 10 Q. You gave your NBA illustration, 11 that the normalized things you do points per 12 game rather than total points because one may 13 have played 20 games and one may have played 30 14 games? 15 A. Right. 16 Q. To normalize data for the metro 17 area of Mississippi, wouldn't it be better to 18 look at the metro area, Madison, Hinds, Rankin 19 County? 20 MS. SIVASHANKER: Objection to 21 form. 22 A. I'm sorry, no. The numerator, the 23 number of arrests is for Madison County. So the 24 denominator should be per capita, how many 25 arrest per capita of exactly what you counted</p>

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<p style="text-align: right;">Page 154</p> <p>1 the numerator for.</p> <p>2 Q. Do you know what the black -- do</p> <p>3 you know where Hinds County is located?</p> <p>4 MS. SIVASHANKER: Objection to</p> <p>5 form.</p> <p>6 A. I couldn't tell you off the top of</p> <p>7 my head.</p> <p>8 Q. Do you know the black population</p> <p>9 of Hinds County?</p> <p>10 MS. SIVASHANKER: Objection to</p> <p>11 form.</p> <p>12 A. I couldn't tell you that off the</p> <p>13 top of my head.</p> <p>14 Q. Do you know the major employers in</p> <p>15 Madison County?</p> <p>16 A. No, I do not.</p> <p>17 Q. Do you know if a significant</p> <p>18 number of African Americans from Hinds County</p> <p>19 commute into Madison County to work?</p> <p>20 MS. SIVASHANKER: Objection to</p> <p>21 form.</p> <p>22 A. I couldn't answer that question.</p> <p>23 I don't know.</p> <p>24 Q. Go back to page 8 of Appendix B of</p> <p>25 your declaration.</p>	<p style="text-align: right;">Page 156</p> <p>1 of looking at the exact same data that --</p> <p>2 ultimately all the data comes from the raw data</p> <p>3 sets that were provided to me. And these are</p> <p>4 just ways of summarizing the same data that</p> <p>5 exists.</p> <p>6 Q. With regard to those per capita</p> <p>7 ratios on page 8 of Exhibit B where the one</p> <p>8 that we were looking at there was one black</p> <p>9 arrest and one non-black arrest, but yet you</p> <p>10 come up with a per capita ratio of black to</p> <p>11 black of 1.6, are you saying that is meaningful</p> <p>12 in any way?</p> <p>13 MS. SIVASHANKER: Objection to</p> <p>14 form.</p> <p>15 A. Absolutely it is. And if it is</p> <p>16 easier for me to write that down, then I'm</p> <p>17 happy to write it down. It is one divided by</p> <p>18 black population, divided by one divided by</p> <p>19 white population equals 1.6. You do the math</p> <p>20 what this actually tells you is the ratio of</p> <p>21 the white population to the ratio of the black</p> <p>22 population is 1.6.</p> <p>23 Q. Based upon one arrest of a black</p> <p>24 person and a one arrest of a non-black person?</p> <p>25 A. Arithmetic is arithmetic. The</p>
<p style="text-align: right;">Page 155</p> <p>1 A. Page 8?</p> <p>2 Q. Yes. Look at "controlled</p> <p>3 counterfeit substance." Where there it was a</p> <p>4 total of two arrests one black, one non-black,</p> <p>5 black percentage of arrests was 50 percent but</p> <p>6 you come up with a per capita ratio of 1.6.</p> <p>7 Tell me how you got that 1.6.</p> <p>8 A. So, you have black arrests, right,</p> <p>9 it is 1. So it is 1 divided by the black population</p> <p>10 divided by one divided by the white population</p> <p>11 that ratio turns out to be 1.6.</p> <p>12 Q. You did the calculation, the per</p> <p>13 capita ratio of black to non-black, why did you</p> <p>14 do that calculation in Exhibit B?</p> <p>15 A. It's, as I said, it is just a --</p> <p>16 it's a fairly common way to evaluate data.</p> <p>17 Back to my NBA example. If you were interested</p> <p>18 in the question of whether LeBron is as good as</p> <p>19 Steph Curry you would look at the per game</p> <p>20 scores and if LeBron is scoring 40 points and</p> <p>21 Steph is scoring 20 points, and you look at</p> <p>22 that and say, wow, he is scoring twice as much.</p> <p>23 That's all this is. It is</p> <p>24 normalizing data and providing an intuitive way</p> <p>25 to kind of look at the data. It is another way</p>	<p style="text-align: right;">Page 157</p> <p>1 laws of -- there is no opinion here. It's</p> <p>2 arithmetic. Division is division. It doesn't</p> <p>3 change whether -- it is absolutely correct.</p> <p>4 There is no question about it.</p> <p>5 Q. I'm not doubting your math. I</p> <p>6 just want to know why you did it. Why you</p> <p>7 thought -- did Simpson Thatcher tell you to do</p> <p>8 that ratio?</p> <p>9 MS. SIVASHANKER: Objection to</p> <p>10 form.</p> <p>11 A. No, they did not.</p> <p>12 Q. So why did you do that ratio?</p> <p>13 MS. SIVASHANKER: Objection to</p> <p>14 form, asked and answered.</p> <p>15 A. Exactly. As I said, the data are</p> <p>16 the data. The raw data are -- comes from my</p> <p>17 understanding as it is laid out in paragraph 3,</p> <p>18 the raw data comes from Defendants. My task</p> <p>19 here is to summarize data and provide some</p> <p>20 calculations and that is what I have done here.</p> <p>21 Q. With regard to Exhibit B?</p> <p>22 MS. SIVASHANKER: You are talking</p> <p>23 still Appendix B, correct?</p> <p>24 MR. ROSS: Appendix B, thank you.</p> <p>25 Q. Do you have any information as to</p>

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<p style="text-align: right;">Page 158</p> <p>1 which of those offense codes are considered</p> <p>2 mandatory or discretionary from the standpoint</p> <p>3 of the officer making the arrest?</p> <p>4 MS. SIVASHANKER: Objection to</p> <p>5 form.</p> <p>6 A. No, I don't have an opinion on</p> <p>7 that.</p> <p>8 Q. I may have asked you this. Do you</p> <p>9 know the percentage of the black population in</p> <p>10 Madison County that lives in an incorporated</p> <p>11 area as opposed to the percentage that lives in</p> <p>12 an unincorporated area?</p> <p>13 MS. SIVASHANKER: Objection to form.</p> <p>14 I think that has asked and answered.</p> <p>15 A. I don't know the answer to that.</p> <p>16 Q. Go to Appendix B page 1 of 12.</p> <p>17 A. Page 1 of 12, okay.</p> <p>18 Q. Third item, "controlled substance</p> <p>19 violation." Do you know what a controlled</p> <p>20 substance violation is?</p> <p>21 A. Not in a legal sense. I have a</p> <p>22 layman's understanding of what a controlled</p> <p>23 substance violation is.</p> <p>24 Q. What is your layman's</p> <p>25 understanding?</p>	<p style="text-align: right;">Page 160</p> <p>1 Q. Your population of 38.4 percent I</p> <p>2 think for Madison County; is that correct?</p> <p>3 A. 38.4 percent, correct.</p> <p>4 Q. Is that based upon the 2010</p> <p>5 decennial census or on ACS estimates?</p> <p>6 A. Instead of guessing, if you go to</p> <p>7 Appendix A it is the United States Census</p> <p>8 Bureau available at www.census.gov -- it is</p> <p>9 laid out exactly as in Appendix A.</p> <p>10 Q. Do you know if that was the 2010</p> <p>11 census or was that the estimates made on an</p> <p>12 annual basis since 2010?</p> <p>13 A. I don't remember that off the top</p> <p>14 of my head. That is obviously something that</p> <p>15 can be verified.</p> <p>16 Q. Do you know if the estimates</p> <p>17 subsequent to the 2010 census vary in any way</p> <p>18 as far as the percentage of blacks in Madison</p> <p>19 County?</p> <p>20 MS. SIVASHANKER: Objection to</p> <p>21 form.</p> <p>22 A. I don't remember that off the top</p> <p>23 of my head. But that is again something that</p> <p>24 could be verified.</p> <p>25 Q. Let's talk about another question</p>
<p style="text-align: right;">Page 159</p> <p>1 A. So my understanding is that so,</p> <p>2 for example, drugs like opioid painkillers or</p> <p>3 some other kinds of medications are controlled</p> <p>4 substances and the only way that you can obtain</p> <p>5 that drug is through a prescription from a</p> <p>6 licensed physician. And again, this is a</p> <p>7 layman's understanding, but if you were to, for</p> <p>8 example, buy one of these prescription</p> <p>9 medications from somebody on the street, I</p> <p>10 think that would be, again a layman's</p> <p>11 understanding of what a controlled substance</p> <p>12 violation is.</p> <p>13 Q. Do you know what the incidents of</p> <p>14 illegal drug use is in the black community</p> <p>15 versus the white community? Have you seen any</p> <p>16 data on that?</p> <p>17 MS. SIVASHANKER: Objection to</p> <p>18 form.</p> <p>19 A. I have not.</p> <p>20 Q. Have you seen any data on the</p> <p>21 incidences of the use of marijuana in the black</p> <p>22 community versus the white community?</p> <p>23 MS. SIVASHANKER: Objection to</p> <p>24 form.</p> <p>25 A. I have not looked at that.</p>	<p style="text-align: right;">Page 161</p> <p>1 about the citation data. I think we have</p> <p>2 established earlier that the data that you were</p> <p>3 provided included not only the sheriff's</p> <p>4 department but also law enforcement, other law</p> <p>5 enforcement agencies in Madison County that may</p> <p>6 have issued citations. Right?</p> <p>7 MS. SIVASHANKER: Objection to</p> <p>8 form.</p> <p>9 A. That's correct.</p> <p>10 Q. But you only looked at the Madison</p> <p>11 County Sheriff's Department citations data, right?</p> <p>12 A. Yes, that's correct.</p> <p>13 Q. Did the data which you had</p> <p>14 pertaining to the other law enforcement</p> <p>15 agencies that may have issued citations in</p> <p>16 Madison County, did that data pertaining to the</p> <p>17 other law enforcement agencies contain racial</p> <p>18 information?</p> <p>19 A. Yes, I believe it did.</p> <p>20 Q. I asked you this with regard to</p> <p>21 arrests. Go to Exhibit 4. With regard to</p> <p>22 citations do you know which, if any, of those</p> <p>23 violations listed on Exhibit 4 are mandatory or</p> <p>24 discretionary from the standpoint of the</p> <p>25 officer issuing the citation?</p>

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<p>1 MS. SIVASHANKER: Objection to 2 form. 3 A. I do not. 4 Q. Look at Exhibit 4, sort of in the 5 middle of your chart there is DUI first 6 offense, DUI second offense. The DUI first 7 offense is it mandatory that the person be 8 arrested, do you know? 9 A. I do not. 10 Q. For DUI second offense, do you 11 know? 12 A. I don't. 13 Q. Are you indicating in Exhibit 4 14 that there were some DUIs that the person was 15 just given a citation but was not arrested? 16 MS. SIVASHANKER: Objection to 17 form. 18 A. This entire exhibit just has to do 19 with citations, so every single bar on this 20 exhibit refers to citations only. 21 Q. Do you know if you could receive a 22 citation and be arrested both for the same 23 incident? 24 MS. SIVASHANKER: Objection to 25 form.</p>	<p>1 your methodology with regard to incident 2 reports. So it says "the PDF files of the 3 incident reports were processed by text 4 recognition software." Do you know what the 5 name of that text recognition software is? 6 A. I don't know the exact name of the 7 software, but the process -- so the PDF files 8 that we got of the incident reports were 9 actually of pretty poor quality and first we 10 tried to run the keyword searches directly on 11 the PDF files that we received, but the files 12 weren't great so what we did as an initial step 13 was we took the PDF files and ran them through 14 our own what we call OCR software. Optical 15 character recognition. That is software that 16 makes it easier for a computer to read text. 17 That is what text recognition software is. I 18 couldn't tell you exactly if the software has a 19 name or what it is called. 20 Q. Do you know what the error rate 21 on that OCR is if there is one? 22 MS. SIVASHANKER: Objection to form. 23 A. I don't believe there is any error 24 rate in that particular. All it's doing is it's taking 25 the PDF file and converting it into -- it is</p>
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<p>1 A. I think you could, but that's not 2 from the data in this data set. 3 Q. And if you could, the citation 4 would show up under the citations chart and the 5 arrest would show up under your arrest chart, 6 right? 7 MS. SIVASHANKER: Objection to 8 form. 9 A. That's what I would believe, yes. 10 Q. Go to paragraph 27. You make the 11 statement in the second sentence "I understand 12 that an incident report is filled out and filed 13 by MCSO officers after certain types of 14 incidents take place such as those involving 15 arrests." Where did you gain that understanding 16 from? 17 A. I think this understanding is 18 based on discussions with counsel largely. 19 Q. What type of other incidents 20 result in an incident report other than and 21 arrest, do you know? 22 A. I'm not sure that I have a -- I'm 23 not sure that I could tell you all the different ways 24 in which an incident report can be generated. 25 Q. Paragraph 29, it's talking about</p>	<p>1 like increasing the brightness of your 2 television. So if it is dark and you turn up 3 the brightness it makes it easier -- if your 4 eyesight is bad, it is make it easier to see. 5 Or using a camera with a flash. That 6 particular process doesn't really change 7 anything. 8 Q. You say down at the end, "Finally 9 the status and race of individuals mentioned in 10 incident reports were parsed from the processed 11 incident reports." How did you do that, 12 manually or with software? 13 A. That's with software and that was 14 the text recognition software. That was done 15 using R. 16 Q. Footnote 28, this is dealing with -- 17 go to page 8 of your declaration, subparagraph C 18 "Data Summary Incident Reports." There is the 19 discussion in paragraphs 27 through 30 dealing 20 with all the incident reports that you looked 21 at. 22 A. Yes, that's correct. 23 Q. Look at paragraph 28 it says "Due 24 to the quality of the files produced by Defendants, there 25 may be files that are not identified by the</p>

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<p style="text-align: right;">Page 166</p> <p>1 methodology described above but would have been 2 identified as relevant by manual review." You 3 did not do a manual review, right? 4 A. That's correct. 5 Q. It says, "However, because I have 6 defined an objective methodology for selecting 7 incident reports to include in this summary, I 8 have no reason to believe that the incident 9 reports represented here are a bias sample of 10 the incident reports produced by Defendants in 11 this matter." 12 Just so I under understand, what 13 is the objective methodology that you're 14 referring to? 15 A. So the objective methodology 16 referred to the part of the program that parses 17 text. An incident report is a piece of paper, 18 the program reads through the piece of paper, 19 reads the name of the individual, reads the 20 race of the individual, among other things. 21 And it does this over and over again for 22 something between 49,000 and 50,000 files 23 because that is how many incidents reports 24 there are. 25 Now imagine that you have an</p>	<p style="text-align: right;">Page 168</p> <p>1 files that weren't identified? What caused you 2 to write that footnote? 3 A. Well, that's just -- when we deal 4 with text data, right, this is the notion of 5 false positives and false negatives. This is 6 just us being experienced with data and knowing 7 that when you work with data there can always 8 be these kinds of errors, especially when 9 you're using programs to identified text from 10 poor quality pieces of paper. 11 I mean I don't know for sure. It 12 may well be the case that in this particular 13 case there are no errors. But based on more 14 than 20 years of experience I know that when 15 you work with data like this and when you're 16 using text processing software, there is likely 17 to be false positives or false negatives in the 18 sense that you read something that you haven't 19 read or you don't read something that you 20 should have read. 21 Q. Does the software have any 22 checks and balances to try to compensate for 23 that? 24 MS. SIVASHANKER: Objection to 25 form.</p>
<p style="text-align: right;">Page 167</p> <p>1 incident report in which the name of the person 2 and the race of the person is really blurred 3 because the quality of the file is really poor, 4 then the program goes through that piece of 5 paper but it can't read the name or the race 6 because the thing is too blurred, in that case 7 it just returns an empty value. 8 However, there is no reason to 9 believe that among the 49,000 or 50,000 pieces 10 of paper that systematically the blurring is 11 weighted one way or the other. In favor or -- 12 too many blacks or too many whites. And that's 13 the sense in which, yes, it is possible that 14 because of the quality of the pieces of paper, 15 the incident report, of the PDFs, the program 16 that parses through it may have missed some but 17 not in a biased manner. 18 Q. You indicate that there may be 19 files that were identified that would have been 20 identified as relevant by a manual review. Do 21 you have any idea how many files may have been 22 identified in a manual review that were not 23 identified through the software program? 24 A. No, by definition I don't. 25 Q. Why do you think there may be</p>	<p style="text-align: right;">Page 169</p> <p>1 A. No, and that is the sense in which 2 the software is completely agnostic to this. 3 The software reads was it is told to read. If 4 the quality of the paper is too bad that it 5 can't read, it returns an empty value. That's 6 it. It doesn't impose anymore judgement than 7 that. 8 Q. The quality of the incident 9 reports I think you said wasn't the best; is 10 that right? 11 A. I think it is fair. 12 Q. The poorer the quality the more 13 errors the software is going to make, right? 14 MS. SIVASHANKER: Objection to 15 form. 16 A. No. Let me back up for a moment. 17 The software won't return more errors. The software 18 won't be able to read more pieces of paper. 19 That is not the same thing as an error. 20 Q. The poorer the quality the more 21 pieces of paper, incident reports, the software 22 will not be able to read? 23 A. That's correct. 24 Q. How many incident reports were 25 there, 56,000, 55,000?</p>

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<p>1 A. No, it is somewhere between 49 and 2 50.</p> <p>3 Q. Let's say 49 to 50,000. Of the 49 4 to 50,000 incident reports how many was the 5 software unable to read?</p> <p>6 A. I'm trying to see if I reported 7 that number because that is certainly 8 something. I don't have an answer to that 9 here. I think that is something that I think 10 we could --</p> <p>11 Q. Could you supply that to us, send 12 it to Simpson Thacher and let them send it to 13 us, please?</p> <p>14 MS. SIVASHANKER: We will take it 15 under advisement.</p> <p>16 COUNSEL REQUESTS FOR INFORMATION</p> <hr/> <p>18 Q. Is that a number that you have 19 available if you went back and looked at the 20 software and the runs that you did?</p> <p>21 A. I think if we went back to the 22 runs we would be able to tell of the 49 to 23 50,000 the number is somewhere between the two. 24 How many were we able to read race accurately 25 and how many were we not able to read</p>	<p>1 information about what's called the DUI Unit in 2 the Madison County Sheriff's Department?</p> <p>3 MS. SIVASHANKER: Objection to 4 form.</p> <p>5 A. No, I don't believe so.</p> <p>6 Q. So you don't know what percentage 7 of roadblocks are initiated by the DUI Unit as 8 opposed to a normal patrol deputy, right?</p> <p>9 MS. SIVASHANKER: Objection to 10 form.</p> <p>11 A. No, I don't believe I know what 12 that -- how many of either kind.</p> <p>13 Q. Since you weren't informed 14 anything about the DUI Unit you don't know what 15 the purpose of the DUI Unit is?</p> <p>16 MS. SIVASHANKER: Objection to 17 form.</p> <p>18 A. Just to clarify. I have an 19 understanding there is a DUI roadblock, I just 20 don't know how many of each type.</p> <p>21 Q. Where did you get that 22 understanding? What is your understanding?</p> <p>23 A. I think I have a general -- I 24 think I believe I might have been told by 25 counsel that some of the roadblocks are related</p>
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<p>1 accurately, I believe that could be done.</p> <p>2 Q. Would you agree the larger 3 percentage that you're unable to read accurately 4 the less reliable the other data would be?</p> <p>5 MS. SIVASHANKER: Objection to 6 form.</p> <p>7 A. No, I wouldn't agreed with that.</p> <p>8 MR. ROSS: We are making that 9 request for the percentage of incident 10 reports that he was unable to read with the 11 software.</p> <p>12 Q. What was name of the software 13 again?</p> <p>14 A. R. The letter R.</p> <p>15 MS. SIVASHANKER: Send us the 16 request we will definitely take it under 17 advisement.</p> <p>18 COUNSEL REQUESTS FOR INFORMATION</p> <hr/> <p>20 MR. ROSS: Let's take five minutes. 21 (Recess taken.)</p> <p>22 BY MR. ROSS:</p> <p>23 Q. On page 9 of your declaration 24 which is Exhibit 3, paragraph 31 and 32 deals 25 with roadblocks. Did counsel give you any</p>	<p>1 to preventing or controlling DUIs. So 2 essentially drunken driving. So that is a type 3 of roadblock. But I don't believe I have seen 4 any specific numbers as to sort of how many of 5 the total roadblocks of a particular type 6 versus another.</p> <p>7 Q. Did you ask for those numbers?</p> <p>8 A. I did not.</p> <p>9 Q. Now, your summary of roadblocks is 10 just based upon incident reports; is that 11 right?</p> <p>12 MS. SIVASHANKER: Objection to 13 form.</p> <p>14 A. Yes.</p> <p>15 Q. You did not refer to the CDD data?</p> <p>16 A. No, this is based on the incident 17 reports, the ones that I have been talking 18 about.</p> <p>19 Q. Do you know what the CDD data 20 is?</p> <p>21 A. I have a very imprecise 22 understanding. I know there is data -- 23 computer dispatch data.</p> <p>24 Q. You didn't review it?</p> <p>25 A. Not in detail and I haven't</p>

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<p style="text-align: right;">Page 174</p> <p>1 reported any of that here.</p> <p>2 Q. Did counsel tell you anything</p> <p>3 about specific files of the DUI Unit and their</p> <p>4 reports to the state and the numbers that were</p> <p>5 in those reports?</p> <p>6 MS. SIVASHANKER: Objection. Are</p> <p>7 you asking with respect to instructions</p> <p>8 regarding this declaration or --</p> <p>9 MR. ROSS: I'm talking about with</p> <p>10 respect to his work on this case.</p> <p>11 A. Can you repeat the question one</p> <p>12 more time?</p> <p>13 (Requested portion of record read.)</p> <p>14 MS. SIVASHANKER: Objection, we</p> <p>15 would say this is limited to his work on</p> <p>16 the declaration. I don't know if you have</p> <p>17 an answer to this question. But...</p> <p>18 A. Not that I can recall.</p> <p>19 Q. So, you would not know when the</p> <p>20 DUI Unit works, right? What time of day?</p> <p>21 A. Sitting here right now I couldn't</p> <p>22 answer that question.</p> <p>23 Q. And you have no knowledge of where</p> <p>24 the largest percentage of DUI arrests are made</p> <p>25 in the county, right?</p>	<p style="text-align: right;">Page 176</p> <p>1 If the word DUI was in the</p> <p>2 incident report it would be pulled up; is that</p> <p>3 correct?</p> <p>4 MS. SIVASHANKER: Objection to</p> <p>5 form.</p> <p>6 A. That's correct.</p> <p>7 Q. And that's regardless of whether</p> <p>8 it was a traffic stop or a roadblock; is that</p> <p>9 correct?</p> <p>10 MS. SIVASHANKER: Objection to</p> <p>11 form.</p> <p>12 A. I'm not sure that I understand the</p> <p>13 question because what this is doing is it's</p> <p>14 going through the incident reports and picking</p> <p>15 out the incident reports that have any of these</p> <p>16 four terms.</p> <p>17 Q. Okay, so if you have an incident</p> <p>18 report that has DUI in it, it is going to pull</p> <p>19 that incident report out regardless of whether</p> <p>20 the DUI arrest was made pursuant to a roadblock</p> <p>21 or a traffic stop?</p> <p>22 MS. SIVASHANKER: Objection to</p> <p>23 form.</p> <p>24 A. I'm not a hundred percent sure. I</p> <p>25 believe that's correct but I'm not a hundred</p>
<p style="text-align: right;">Page 175</p> <p>1 MS. SIVASHANKER: Objection to</p> <p>2 form.</p> <p>3 A. Not sitting here right now, I</p> <p>4 couldn't tell you that.</p> <p>5 Q. Brian Ricchetti is Cornerstone in</p> <p>6 Chicago and you're Cornerstone in New York, at</p> <p>7 least with regard to this case. Did you even</p> <p>8 know that Brian Ricchetti was doing work on</p> <p>9 that matter?</p> <p>10 A. I knew Brian was working on this,</p> <p>11 yes.</p> <p>12 Q. Did you know what he was working</p> <p>13 on?</p> <p>14 A. No.</p> <p>15 Q. Have you read his report?</p> <p>16 A. No, I have not.</p> <p>17 Q. Let's go to Exhibit 6, please.</p> <p>18 Exhibit 6 when it refers to "arrests from</p> <p>19 incident reports related to stops at</p> <p>20 roadblocks," is that referring to all arrests</p> <p>21 or just DUI arrests?</p> <p>22 A. All arrests.</p> <p>23 Q. Go to paragraph 35. This is</p> <p>24 talking about arrests from traffic stops. I</p> <p>25 think I asked you this but I want to be sure.</p>	<p style="text-align: right;">Page 177</p> <p>1 percent sure. I think that's right. I think</p> <p>2 it is going through the incident report and</p> <p>3 picking out incident reports that have the DUI</p> <p>4 and from those it is trying to identify the</p> <p>5 arrests.</p> <p>6 Q. The same thing would be if</p> <p>7 the incident report had traffic offenses in it,</p> <p>8 it would pull -- if it had "traffic offenses"</p> <p>9 in it, it would pull that incident report</p> <p>10 regardless if the arrest was pursuant to a</p> <p>11 traffic stop or pursuant to a roadblock?</p> <p>12 MS. SIVASHANKER: Objection to</p> <p>13 form.</p> <p>14 A. I believe that's right.</p> <p>15 Q. What does VTO stand for, do you</p> <p>16 know?</p> <p>17 A. It is in one of the data</p> <p>18 dictionaries that -- I'm not a hundred percent</p> <p>19 sure. Vehicle traffic offense. I forget. It</p> <p>20 is in the data dictionary.</p> <p>21 Q. What is a data dictionary?</p> <p>22 A. It is one of the -- it is in one</p> <p>23 the documents that in Appendix A that I have</p> <p>24 cited. You know, in one of the documents that</p> <p>25 was provided by Defendants at the back of it</p>

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<p>1 there is like this long list of acronyms and</p> <p>2 what they mean, offense codes and that's what I</p> <p>3 am referring to as data dictionary.</p> <p>4 That is the place that I remember</p> <p>5 seeing VTO. But I don't remember exactly what</p> <p>6 it stands for. It is one of these four</p> <p>7 documents. It is not the complaint but it is</p> <p>8 one of the documents that I have cited in</p> <p>9 Appendix A.</p> <p>10 Q. You're saying the data dictionary</p> <p>11 that you referred to is in one of the documents</p> <p>12 in Appendix A?</p> <p>13 A. Yes. It is in the back of like --</p> <p>14 it is like the last few pages of one of these</p> <p>15 documents and one of those document is one</p> <p>16 place that I have seen the term VTO.</p> <p>17 Q. To be clear on this, all of the</p> <p>18 search terms that you used with regard to</p> <p>19 arrests with regard to citations or with regard</p> <p>20 to subcategories were supplied by counsel, they</p> <p>21 were not search terms that you developed</p> <p>22 yourself?</p> <p>23 MS. SIVASHANKER: Objection to</p> <p>24 form.</p> <p>25 A. Yes, that's absolutely correct. I</p>	<p>1 MR. ROSS: I have no further</p> <p>2 questions.</p> <p>3 MS. SIVASHANKER: We have no</p> <p>4 questions.</p> <p>5 (TIME NOTED: 2:14 P.M.)</p> <p>6</p> <p>7</p> <p>8 <u>RAHUL K, GUHA, PH.D</u></p> <p>9</p> <p>10 Subscribed and sworn to before me</p> <p>11 this ____ day of _____, 2018</p> <p>12</p> <p>13 _____</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>
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<p>1 was just trying to remember what VTO stood for.</p> <p>2 Q. Did any of the people that did --</p> <p>3 there was one category where you said you did</p> <p>4 do a manual review of the incident reports. Do</p> <p>5 you remember that with regard to Exhibit 9, I</p> <p>6 think?</p> <p>7 A. That's correct, I do.</p> <p>8 Q. Did any of the people who did that</p> <p>9 review have any training on law enforcement</p> <p>10 methods?</p> <p>11 MS. SIVASHANKER: Objection to</p> <p>12 form.</p> <p>13 A. Not that I know of.</p> <p>14 MR. ROSS: Let's go off the record.</p> <p>15 (Recess taken.)</p> <p>16 (CONTINUED ON NEXT PAGE.)</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	<p>1 STATE OF NEW YORK) Pg__ of __Pgs</p> <p>2 ss:</p> <p>3 COUNTY OF NEW YORK)</p> <p>4</p> <p>5 I wish to make the following changes, for the</p> <p>6 following reasons:</p> <p>7 PAGE LINE</p> <p>8 ____ CHANGE: _____</p> <p>9 REASON: _____</p> <p>10 ____ CHANGE: _____</p> <p>11 REASON: _____</p> <p>12 ____ CHANGE: _____</p> <p>13 REASON: _____</p> <p>14 ____ CHANGE: _____</p> <p>15 REASON: _____</p> <p>16 ____ CHANGE: _____</p> <p>17 REASON: _____</p> <p>18 ____ CHANGE: _____</p> <p>19 REASON: _____</p> <p>20 ____ CHANGE: _____</p> <p>21 REASON: _____</p> <p>22 ____ CHANGE: _____</p> <p>23 REASON: _____</p> <p>24</p> <p>25</p>

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CERTIFICATE

STATE OF NEW YORK)

: ss.

COUNTY OF NEW YORK)

I, WILLIAM VISCONTI, a Shorthand Reporter and Notary Public within and for the State of New York, do hereby certify:

That prior to being examined, the witness named in the foregoing deposition was duly sworn to testify the truth, the whole truth, and nothing but the truth;

That said deposition was taken down by me in shorthand at the time and place therein named and thereafter reduced by me to typewritten form and that the same is a true, correct, and complete transcript of said proceedings.

Before completion of the deposition, review of the transcript [X] was [] was not requested. If requested, any changes made by the deponent (and provided to the reporter) during the period allowed are appended hereto.

I further certify that I am not interested in the outcome of the action.

Witness my hand this day of 2018.

WILLIAM VISCONTI

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<http://www.deposition.com>**EXHIBIT 2**

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IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF MISSISSIPPI
NORTHERN DIVISION

LATOYA BROWN; LAWRENCE)
BLACKMON; HERBERT ANTHONY)
GREEN; KHADAFY MANNING;)
QUINNETTA MANNING; MARVIN)
MCFIELD; NICHOLAS SINGLETON;)
STEVEN SMITH; BESSIE THOMAS;)
And BETTY JEAN WILLIAMS TUCKER,)
Individually and on behalf of a class of)
All others similarly situated,)

Plaintiffs,)

v.)

MADISON COUNTY, MISSISSIPPI;)
SHERIFF RANDALL S. TUCKER, in his)
Official capacity; and MADISON)
COUNTY SHERIFF'S DEPUTIES)
JOHN DOES #1 through #6, in their)
Individual capacities,)

Defendants.)

Civil Action No. 3:17-cv-347WHB-LRA

Dwight D. Steward, Ph.D.
Rebuttal Expert Report
RE: Rahul Guha, Ph.D.

May 8, 2018

EXHIBIT 3

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Introduction and summary of my opinions

1. My name is Dwight Steward, Ph.D. and I am an economist and statistician and have been retained to perform an analysis in this lawsuit. In this report, I provide a rebuttal to the Plaintiff's statistical expert, Rahul Guha, Ph.D.

2. As an economist and statistician, I have provided statistical and economic consultation and reports on racial discrimination issues in areas including police racial profiling, police use of force, employment, and financial lending. I have provided statistical and economic research and expert witness testimony in court litigation and provided consultation in non-litigation settings to employers, governmental entities, and police agencies.

3. In police agency projects, I have worked with civil rights organizations including the NAACP, LULAC, ACLU, and Texas Criminal Justice Coalition (TCJC), as well as police organizations such as the Police Executive Research Forum (PERF), on issues involving traffic stops, police searches, and police use of force. My co-authored statistical research of the Texas Department of Public Safety (DPS) stop and search database was one of the first large scale statistical studies of police racial profiling data in Texas. In addition, I worked for over seven years with the TCJC, ACLU, NAACP, and Texas police agencies on the statewide collection and analysis of police stop and search data and reports. Our research on the analysis of racial profiling allegations in Texas police agencies' stops and searches was cited by police racial profiling researchers and received national media attention. I have also assisted civil rights organizations and stakeholders, and members of the Texas State legislature, on the

development of a statewide repository for police agency racial profiling data and reports in Texas. During the Texas State 77th Legislature, I provided testimony to the Texas State Senate Research in support of HB-1074 Bill: Racial Profiling in Texas.

4. In addition, I have worked with economics professors from Sam Houston State University on the development of methodologies and traffic and population statistical baselines to study issues related to police racial profiling. I have given presentations at professional meetings and to police agency organizations, including PERF, on issues related to the statistical analysis of police racial profiling and use of force. I have also served as an expert witness for Plaintiffs and Defendants in legal cases involving allegations of police racial profiling. In Regina Kelly et al. v. John Paschall et al., in the United States District Court for the Western District of Texas, Waco Division, I served as a statistical expert witness for the Plaintiffs. In this case the Plaintiffs alleged that The South-Central Texas Narcotics Task Force, which was a group of police agencies set up for drug policing in Limestone and Robertson counties, were racially profiling African-Americans. In this case, I analyzed incident level data, police agency level data, and numerous population and crime databases to study the Plaintiffs' allegations of police racial profiling.

5. In addition to my work involving police agencies, I have served as an expert witness and consultant in federal and state court on statistical issues in numerous employment discrimination cases involving terminations, promotions, compensation, and hiring. I have provided expert reports, deposition testimony, and trial testimony on statistical issues in employment matters in states including Mississippi,

Alabama, Louisiana, Georgia, Florida, Texas, Oklahoma, California, New Mexico, Arizona, Washington, Illinois, Iowa, Missouri, Massachusetts, New Jersey, New York, and Pennsylvania. I have also presented research to numerous academic and professional groups on the issues related to the statistical analysis of discrimination in employment.

6. In addition, I have also held teaching positions in the Department of Economics at The University of Texas at Austin, the Red McCombs School of Business at The University of Texas at Austin, and the College of Business Administration at Sam Houston State University. In my teaching positions, I have taught dozens of courses in statistics and its application to economic problems including discrimination. Among my courses at the University of Texas at Austin, I designed and taught a semester length upper division course devoted to the study of economic and statistical models of racial and gender discrimination.

7. I hold a Ph.D. in Economics from the University of Iowa ('95) and a B.A. in Economics from The University of Texas at Austin ('90). While at UT-Austin, I also earned a commission in the U.S. Army through Army R.O.T.C. and served stateside during Operation Desert Storm in the Field Artillery. My full curriculum vitae is attached to this report.

8. In brief, it is my opinion that Dr. Guha's arrest and citation tabulations provide no useful insights in this case. Dr. Guha states in his declaration that "without the benefit of summaries and calculations, it may be inconvenient for the Court to

examine the contents of these data and document sets” in this case.¹ He further states that his declaration is limited to presenting the results of his summaries.

9. In contrast to his assertions, the data summaries and tabulations that Dr. Guha presents are not objective, generally accepted calculations designed to help “the Court to examine the contents of these data and document sets”. Instead, Dr. Guha is clearly performing a statistical analysis of MCSD data based on census benchmarks, assumptions, and methodologies that he has chosen to employ in this case. Dr. Guha’s tabulations and summaries are clearly designed to create the impression that African-Americans are disproportionately arrested and cited by MCSD. However, Dr. Guha provides no context or understanding of the underlying data to help the Court understand his tabulations and summaries of MCSD arrest and citations data. The census benchmarking methodology that Dr. Guha explicitly states that he is utilizing to summarize the data in this case has been debunked by law enforcement and police racial profiling researchers for years.

10. My analysis is discussed in more detail in the following sections of this report. The case-related documents, treatises, and other information used to prepare this analysis are listed in Exhibit A, footnotes, and in the text of this report. I respectfully reserve the right to make changes to this report.

Overview of Dr. Guha’s Summary Declaration Analysis

11. In Dr. Guha’s March 13, 2018 declaration, which he refers to as a summary declaration, he performs three analyses of the MCSD arrest and citation data

¹ See March 13, 2018 Summary Declaration of Dr. Guha, Pg. 2 Para. 5.

in this case. Dr. Guha states in his declaration that the data in this case is voluminous and “without the benefit of summaries and calculations, it may be inconvenient for the Court to examine the contents of these data and document sets.” Dr. Guha’s declaration and deposition testimony indicate that he analyzed MCSD data at face value and did not obtain information regarding the underlying administrative and judicial processes that generated the MCSD arrest and citation data in this case.

12. In his first analysis, Dr. Guha provides summary analyses of the records of the individuals who were arrested by MCSD and booked into Madison County Detention Center (MCDC) from January 1, 2012 through September 20, 2017. Using this data, he calculates the African-American percentage of arrests for each type of offense such as Burglary, Assault, and Improper Turn While Driving. Dr. Guha then compares the racial distribution of the arrests for each type of offense to the general Madison County population. Dr. Guha uses population data from the U.S. Census on all individuals aged 0 to 100 living in Madison County to establish his Census benchmark for the Madison County Detention arrest records. The MCDC arrest records used by Dr. Guha in his Census benchmarking analysis include adult individuals who lived in Madison County as well as those who lived outside of Madison County. It is my understanding that the MCDC generally does not house juvenile offenders.

13. In his second analysis, Dr. Guha calculates the African-American percentage of citations for each type of violation, such as having no auto-insurance, driving with a suspended license, and reckless driving, issued by MCSD. Dr. Guha then compares the racial distribution of the citations for each type of violations to the general

Madison County population. Dr. Guha uses population data for all individuals living in Madison County to establish his Census benchmark for the Madison County Detention citation tabulations. The MCSD citations used by Dr. Guha in his Census benchmarking exercise include motorists who lived in different areas of Madison County as well as those who lived outside of Madison County. In Dr. Guha's third analysis he presents data tabulations of MCSD arrests that he believes were made at traffic roadblocks, apartment walkthrough, and traffic stops.

14. Dr. Guha testified that the Plaintiffs' attorneys instructed him as to which arrest and citation data to tabulate and analyze. Dr. Guha further testified that he determined and developed the Census population benchmark to analyze the MCSD arrest and citation data. Dr. Guha also testified that the use of the type of Census population benchmarking that he uses to produce his analyses is "a fairly standard way of looking or presenting data."² However, Dr. Guha, who identified himself as an antitrust economic expert, provided no studies, law enforcement research or other learned treatises in his declaration or at his deposition to support his use of Census benchmarking in this case.

15. As will be discussed in the following sections, Dr. Guha's arrest and citation tabulations provide no useful insights in this case.

Dr. Guha's data summaries and tabulations are misleading and inaccurate

16. In police racial profiling litigation, as well as in general research, arrest and citation data cannot provide useful insights without a thorough understanding

² See April 18, 2018 Deposition of Dr. Guha, Pg. 150 Ln. 13.

of the underlying administrative and judicial processes that generated the law enforcement data. An understanding of these processes is required before useful tabulations can be performed let alone before analyses and summaries can be interpreted. In contrast to his assertions, the data summaries and tabulations that Dr. Guha presents are not objective, generally accepted calculations designed to help “the Court to examine the contents of these data and document sets.”

17. Instead, Dr. Guha is clearly performing a statistical analysis of MCSD data based on census benchmarks, assumptions, and methodologies he has chosen to employ in this case. Dr. Guha testified that he chose the Census benchmark, as well as the methodology of comparison, that used to perform his statistical summaries.

A. That's correct, that's what I said. I'm sorry, maybe I miss -- so it is the number of blacks arrested divided by the total number of blacks in the county.

Q. Where did you come up with this concept? Did Simpson Thacher ask you to do that?

MS. SIVASHANKER: Objection to form.

A. No.

Q. Did you decide to do it on your own?

A. Yes. It's a fairly standard way of looking or presenting data.

Q. You have you seen that in any literature relating to law enforcement?

MS. SIVASHANKER: Objection to form.

A. As I said, I don't do law enforcement, but this is a very standard way of looking at it.

Q. Is your answer no?

A. In law enforcement?

Q. Right.

A. No.³

18. Dr. Guha's tabulations and summaries are clearly designed to create the impression that African-Americans are disproportionately arrested and cited by MCSD. However, Dr. Guha provides no context or understanding of the underlying data to help the Court understand his tabulations and summaries of MCSD arrests and citations. In fact, even when a small amount of context is considered, not only are Dr. Guha's tabulations misleading, but they are simply wrong.

19. Specifically, the census benchmarking methodology that he explicitly states that he is utilizing in this case, has been debunked by law enforcement and police racial profiling researchers for many years.⁴ As previously described, Dr. Guha calculates the racial distribution of the MCSD offenses and then compares the racial distribution of the arrests for each type of offense to the general population of all ages living in Madison County. For example, he purports to find that 77% of the arrests for 'improper turn' or 'turning without a turn signal' are African-American. Dr. Guha then reports to find that after adjusting by the population in Madison County,

³ See April 18, 2018 Deposition of Dr. Guha, Pg. 150 Ln. 1-25.

⁴ It should be noted that Dr. Guha's Census benchmarking approach is similar to the Census benchmarking approach used by the Plaintiffs' statistical expert, Dr. Bryan Ricchetti. I understand both Drs. Ricchetti and Guha are economists who work at Cornerstone. In both of their reports, they attempt to create population adjusted law enforcement activity, such as arrest rates and roadblock placement, by adjusting those rates by the number of people in Madison County. It is not clear if Drs. Guha and Ricchetti, or their staffs, worked together in some manner in their analyses.

African-Americans are 5.43 times more likely than non-African-American motorists to be arrested by MCSD for improper turn.

20. Even if Dr. Guha's numbers were correct, which they are not, his use of a general population census benchmark, which is generally acknowledged to be flawed, is completely inappropriate and uninformative in this case. The census benchmark that Dr. Guha utilizes looks only at who lives in Madison County not who is actually at risk of being arrested by MCSD. As is described below, it is widely known and undisputed that criminality and the demographics of a pool of individuals at risk of being arrested by law enforcement can and does differ from the demographics of the individuals living within a given location.

21. It is a well-established and noncontroversial fact that the arrest rate of a particular racial group may differ from one another due to factors other than police racial profiling. It is also well known that factors such as rates of parole, probation, and incarceration are different for different racial groups. While many researchers, including myself, may wish that certain empirical facts did not exist, the requirement to account for those facts remains. Simply ignoring these types of established factors in a statistical analysis will necessarily create erroneous inferences of police racial profiling in some instances where it in fact does not exist. Conversely, in other instances, ignoring these types of factors in a statistical analysis will result in an analysis that is erroneously not suggestive of racial profiling.

22. For instance, it is widely known that African-Americans are significantly more likely than Whites to be on probation, parole, or to have been

incarcerated.⁵ Other generally accepted and widely used data also clearly shows that involvement rates in criminal activity, either as a victim or perpetrator, are also different for different racial groups. For instance, African-Americans are more likely than Whites to have been either a victim or perpetrator in a crime.⁶ It is reasonable to expect that related legal issues such as parole violations, probation violations and law enforcement warrants will also be different for different racial groups. In contrast to Dr. Guha's misleading data tabulations, the outcomes of police agency actions, including MCSD, are in fact impacted by these deep-rooted historic socio-economic and demographic empirical facts.

23. Dr. Guha's tabulations do not consider any of these types of established factors in his summary analysis of MCSD arrest rates and cannot provide the Court with any useful insights. The census benchmarks that Dr. Guha's constructed do not even take into account the basic fact that the MCDC detention records generally do not include juvenile arrests or arrest records for persons age 0 to 17.⁷ Dr. Guha's census benchmark, which is a count of all individuals living in Madison County aged 0 to 100, is clearly incorrectly based on the assumption that juvenile arrests are included in the MCDC arrest records.

⁵ Danielle Kaeble and Thomas P. Bonczar. Probation and Parole in the United States, 2015 and the references therein. U.S. Department of Justice Bureau of Justice Statistics. Revised February 2, 2017; E. Ann Carson, Ph.D. and Elizabeth Anderson. Prisoners in 2015 and the references therein. U.S. Department of Justice Bureau of Justice Statistics; and population data from the American Community Survey.

⁶ Jennifer L. Truman, Ph.D. and Lynn Langton, Ph.D., BJS Statisticians. Criminal Victimization, 2014 and the references therein. U.S. Department of Justice Bureau of Justice Statistics. Revised September 29, 2015; and population data from the American Community Survey.

⁷ I understand that juveniles that are being charged for a particular crime as an adult may be detained in the MCDC.

24. Dr. Guha makes no attempt to create a census benchmark that accounts for this fact or any other generally acknowledged non-racial factors. In fact, Dr. Guha provides no studies, law enforcement research or other learned treatises in his declaration or at his deposition to support his use of Census benchmarking in this case. At his deposition, Dr. Guha only provided an example of comparing the scoring output of two NBA basketball players, LeBron James and Steph Curry, as support for his methodology. Dr. Guha was not aware of any law enforcement literature that supported his approach.

Q. This racial profile which we were just discussing, you said it was a standard way of looking at data.

A. That's correct.

Q. Do you have an opinion on that?

MS. SIVASHANKER: Objection to form.

A. I mean it is just -- I'm saying this is a -- this is a very common way with which people look at data. There is nothing particularly like special to this. And the example that I was about to give you is if somebody were to ask you, you know, who is scoring more this year in the NBA, Steph Curry or LeBron James, the answer wouldn't be well, LeBron got 3000 points and Steph Curry got 2000 points. That makes no sense because you don't know how many games each one of them has played. Right. So you always say, okay, Steph Curry is scoring 35 points a game and LeBron is scoring 30 points a game. So it is just normalizing things so two things become comparable. That's all this is.⁸

⁸ See April 18, 2018 Deposition of Dr. Guha, Pg. 151 Ln. 5-25, Pg. 152 Ln. 1-3.

25. In any event, it is evident even from a quick review of MCSD's arrest records and Dr. Guha's work files, that his census benchmark does not even faintly resemble the actual population at risk of being arrested by MCSD, or any police agency for that matter. According to Dr. Guha's deposition testimony, he did not attempt to obtain an understanding of the underlying factors that generated the MCSD data. His deposition testimony indicates that he did not question the underlying arrest data, request additional contextual information, or even determine if there was the need to obtain such information.

Q. I believe you have already said you did not talk to anybody at the Madison County Justice Court office, did you?

MS. SIVASHANKER: Objection to form.

A. No, I did not.

Q. You didn't make any inquiry how that data was collected, did you?

MS. SIVASHANKER: Objection to form.

A. No, I did not.⁹

Dr. Guha's deposition testimony indicates that he did not have a particular understanding of how the judicial process worked in regards to the MCSD arrest data. Dr. Guha testified that he did not know how outstanding arrest warrants were reflected in his data or how they may have impacted his summaries and calculations.

⁹ See April 18, 2018 Deposition of Dr. Guha, Pg. 56 Ln. 10-20.

Q. Your data does not indicate which of the arrests were pursuant to a warrant or based upon a current violation, right?

MS. SIVASHANKER: Objection to form. It was not your data but you can answer.

A. So, I'm not sure that it identifies the process, but to the extent that the existing -- preexisting offense leads to an arrest, that is a row of data. It does show up if you look at Appendix B every single offense code will eventually show up.

Q. Let's go to Appendix B. Go to the first page which I think is 1 of 12 and look at the third one down, the control substance violation and you have 1,867 arrests there. Do you know how many of those were pursuant to a warrant and how many of those were based upon the officer smelling marijuana -- the officer seeing a controlled substance on the scene when he made the arrest?

MS. SIVASHANKER: Objection to form.

A. No.

Q. The same would be true for every category in Appendix B, right?

MS. SIVASHANKER: Objection to form.

A. I'm not sure that I understand what the question means? Can you take another row and ask a specific question?

Q. Let's say I'm on page 2 of 12 this time.

A. Okay.

Q. Let's say aggravated assault, offense code is 9737 (2) and you have 199 arrests. Do you know how many of those arrests were pursuant to a warrant and how many of them were based upon the officer seeing an assault in progress?

MS. SIVASHANKER: Objection to form.

A. No I don't.¹⁰

Dr. Guha also testified that in some instances, and presumably in this case, further investigation of the data is unnecessary because many underlying factors are standardized and generally understood.

Q. Do you ever go talk to the people who enter the data to learn their process and their thinking in entering the data?

MS. SIVASHANKER: Objection to form.

A. You know I'm trying to think of data that I commonly use. I commonly use data from sources like IMS which has data on pharmaceutical sales. There is no question of going to the source and asking how you entered the data. That is the data that you get and it is widely considered to be a reliable source and you use the data.

If you were to work with stock price data, securities data you would download the data from the Crisp database and you would not go to the New York Stock Exchange and try to figure out whether some trades actually happened. So, no, I mean like you know for the vast majority of cases that I could think of, I mean going back and sort of trying to sort of figure out how the data were compiled you know is not feasible or sensible.¹¹

26. In contrast to Dr. Guha's deposition testimony, MCSD arrest and citation data in this case is not New York Stock Exchange stock price data or Pharmaceutical company drug pricing data. As has been the case with other police agency projects that I worked on, police agency records are not standardized, and a thorough understanding of the data is required before reliable tabulations can be

¹⁰ See April 18, 2018 Deposition of Dr. Guha, Pg. 122 Ln. 1-25, Pg. 123 Ln 1-18.

¹¹ See April 18, 2018 Deposition of Dr. Guha, Pg. 106 Ln. 25, Pg. 107 Ln. 1-23.

constructed, let alone interpreted. If Dr. Guha would have undertaken such an exercise, he would have quickly seen that his general population census benchmark data is an inaccurate representation of the actual portion of Madison County that is at risk of being arrested by MCSD.

27. Dr. Guha's analysis does not take into account that many police agency arrests are the result of court order arrest warrants and not necessarily individual decisions made by police officers. Generally, in these instances, the individual who was arrested was charged with an offense during some earlier time period and did not successfully resolve the legal issue with the court and an arrest warrant is issued. I understand that an arrest warrant could be issued for any number of reasons such as probation or parole violations, failure to appear at court, and failure to pay a fine. I also understand that if an officer-citizen contact occurs and there is an outstanding warrant for that individual then the officer has little to no discretion as to whether to arrest the individual or not. These types of arrests are generally referred to as non-discretionary arrests by police researchers.

28. In response to my request, MCSD provided information regarding arrests pursuant to outstanding warrant arrests from local trial courts.¹² Even cursory summary tabulations of this data show that a significant portion of the African-American MCSD arrests in Dr. Guha's data are the result of outstanding arrest warrants issued by local trial courts. Overall, the data shows that African-Americans are nearly four (4)

¹² See "Justice Court Warrant Arrest 1 from 01012012.csv" and "Warrant Module 01012012-09202017.csv".

times more likely to have been arrested as a result of having an outstanding court issued warrant than Whites in Madison County.

29. Further, the warrant data shows that many of the arrests that Dr. Guha shows as being the result of minor traffic offenses are in fact the result of an outstanding arrest warrant. For example, Dr. Guha's tabulations and underlying data indicates that on November 29 and 30, 2012, two African-Americans were arrested for improper equipment on vehicle. However, neither of these individuals were actually arrested for improper equipment on vehicle. Both of these individuals had outstanding warrants and were arrested subsequent to those warrants. Similarly on July 5, 2012, Dr. Guha's tabulations state that two African-Americans were arrested for operating a vehicle without a license. Both of these individuals were actually arrested for outstanding warrants. This type of pattern is evident throughout Dr. Guha's arrest data calculations.

30. Clearly, MCSD officers have limited to no discretion in the decision to arrest individuals with outstanding arrest warrants, regardless of their race. The socio-economic demographic factors that may have generated or perpetuate the unfortunate racial disparity in arrest rates are clearly outside the control of police agencies including MCSD. Dr. Guha's failure to even consider the impact of court order arrest warrants in his analysis further shows that without context, his raw tabulations and comparisons do not provide the court with any useful insights.

31. If Dr. Guha would have studied, examined, and provided context from the arrest records of other police agencies he would have further seen the problems

with the Census benchmark that he selected in his arrest analysis. Even cursory tabulations of the MCDC jail docket arrest data and publicly available FBI Uniform Crime Report (UCR) arrest data show that MCSD arrest rates are similar to other police agencies operating in racially diverse geographical areas. These comparisons further illustrate that providing raw tabulations of law enforcement data that do not incorporate a solid understanding of the socio-economic factors process that generate the data, can incorrectly create an inference of police racial bias.

32. For instance, in his summary tables Dr. Guha calculates that the African-American arrest rate for Larceny is 2.58 times greater than that of non-African-Americans. Tabulations of FBI UCR arrest data shows that the MCSD arrest rate of African-Americans for Larceny is not inconsistent with that of other police agencies operating in racially diverse environments. For example, Rankin County, Jackson County, and the City of Aberdeen are three municipalities in Mississippi. Rankin County is a county that borders Madison County, Jackson County is a county in Southeast Mississippi, and the City of Aberdeen is in Northeast Mississippi. According to the U.S. Census Bureau, 38.4% of Madison County population is African-American. The data shows that 20.5% and 21.9% of the populations of Rankin County and Jackson County are African-American, respectively.¹³ The population of the City of Aberdeen is 67.3% African-American.

¹³

<https://www.census.gov/quickfacts/fact/table/aberdeencitymississippi,madisoncountymississippi,rankincountymississippi,jacksoncountymississippi/PST045216>

33. The FBI UCR arrest data shows that the MCSD arrest rates calculated by Dr. Guha for African-Americans for Larceny are consistent with the African-American arrest rate for Rankin County Sheriff's Department, Jackson County Sheriff's Department, and the City of Aberdeen Police Department.¹⁴ These police agencies have African-American arrest rates for Larceny that are similar to or higher than MCSD. The Rankin County Sheriff's Department and Jackson County Sheriff's Department, both of which have a lower percentage population of African-American residents than Madison County, have a higher Larceny arrest rate for African-Americans than the 2.58 arrest rate calculated by Dr. Guha. Rankin County Sheriff's Department and Jackson County Sheriff's Department have African-American Larceny arrest rates of 3.39 and 10.19, respectively. The City of Aberdeen, which has a higher percentage population of African-Americans, has a Larceny arrest rate for African-Americans that is 7.36 times that of non-African-Americans using Dr. Guha's arrest rate calculation methodology.

34. These types of arrest rate patterns are evident throughout the arrests and offenses in the underlying data that Dr. Guha used to construct his tabulations and summaries. These types of comparisons clearly illustrate the potential impact of socio-economic factors on the racial distribution of arrest rates that are outside of the control of any particular police agency, including MCSD.

35. The usefulness of Dr. Guha's calculations is further undermined by the sheer inaccuracy of the arrest tabulations and summaries that he creates. In a

¹⁴ FBI UCR source: 36794-0001-Data.dta, downloaded from <https://www.icpsr.umich.edu/icpsrweb/NACJD/studies/36794/version/1>.
Census source: <https://www.census.gov/data/datasets/2016/demo/popest/counties-detail.html>.

number of instances, Dr. Guha's fundamental lack of knowledge of the underlying data results in attributing an individual's arrest to an incorrect offense. For example, Dr. Guha's tabulations in Appendix C show that MCSD cited 88 African-Americans for 'Improper Turn/ Turning without a Turn signal'. Dr. Guha's tabulations in Appendix B indicate that MCSD arrested all 88 African-Americans for the 'Improper Turn/ Turning without a Turn signal' violation. Dr. Guha's tabulations are just wrong.

36. A closer examination of Dr. Guha's underlying data shows that none of these 88 African-Americans were actually arrested for 'Improper Turn' by MCSD. Most of the individuals identified as being arrested as a result of an improper turn by Dr. Guha were actually arrested for an offense or offenses where the officer had little to no discretion in the decision to make the arrest.

37. For instance, in Dr. Guha's data, arrest number 58212 of a 30-year-old African-American male that occurred on March 18, 2012 is classified as an arrest resulting from an improper turn. A closer review of the underlying data in Dr. Guha's tabulations shows that this person was not actually arrested as a result of making an improper turn. The underlying data shows that this individual was actually arrested as a result of a third DUI charge. Similarly, Dr. Guha's data indicates that arrest number 56104 of a 25-year-old African-American male that occurred on May 26, 2014 was the result of an improper turn. However, a closer review of the underlying data in Dr. Guha's tabulations shows that this person was actually arrested as a result of being in possession of a stolen firearm. Further, in Dr. Guha's data arrest number 73318 of a 34-year-old African-American female that occurred on August 27, 2017 is

classified as an arrest resulting from an improper turn. A closer review of the underlying data in Dr. Guha's tabulations shows that this individual was not actually arrested as a result of making an improper turn. Instead, this individual was actually arrested as a result of a Controlled Substance Violation. This type of pattern is evident all throughout the arrest data tabulations that Dr. Guha presents in his declaration¹⁵.

38. Dr. Guha's overall failure to account for the difference between discretionary arrests and non-discretionary arrests in tabulations compounds the problems with Dr. Guha's census benchmarks. In police and law enforcement research, a discretionary arrest is one where the officer typically observes some type of law violation but may have some discretion in the decision to make an arrest, write a citation or other actions. A non-discretionary arrest is typically one where an officer observes some type of crime, such burglary, assault, and armed robbery, and the officer has limited to no discretion on the decision to make an arrest.

39. It is generally accepted that arrests where the officer has little or no discretion in the decision to make the arrest, provide no insights into an analysis of potential police racial bias or racial profiling. Providing tabulations of these types of arrests provides the court with no insights into the allegations at issue in this case. Instead of excluding these arrests from his tabulations, Dr. Guha just assumes, implicitly or explicitly, that these two types of arrests are fungible when in fact they are not. Dr.

¹⁵ Further, Dr. Guha testified that the the Plaintiffs' attorneys provided the search terms to use for incident report searches that Dr. Guha reports in his declaration. Dr. Guha did not do any analysis as to whether these were good search terms for the categories that the reports were being pulled for use in his tabulations., The quality of Dr. Guha's data is also suspect. Dr. Guha testified that computer software was used to read in incident reports. Dr. Guha testified that he was not able to read all of the computer reports but he could not state how many of the incident reports that could not be read by his computer program.

Guha testified that he did not distinguish between discretionary and non-discretionary arrests when he performed his tabulations and summaries.

Q. Do you have any information as to which of those offense codes are considered mandatory or discretionary from the standpoint of the officer making the arrest?

MS. SIVASHANKER: Objection to form.

A. No, I don't have an opinion on that.¹⁶

40. Arrests that result from citizen calls to MCSD further illustrate how Dr. Guha's failure to account for the underlying factors in the arrest data makes his census benchmarking and arrest data tabulations and summaries useless in this case. Citizen calls to MCSD for assistance, or what is typically referred to as 'calls for service', can occur when individuals call MCSD to report criminal activity of some sort. It is generally acknowledged that if an officer is called to a location and observes criminal activity then an arrest can possibly occur. Accordingly, if certain areas place more calls for MCSD services, it is likely that those areas will have more arrests regardless of the race of the citizens in that area. The general population-based census benchmark that Dr. Guha uses in his tabulations do not account for this empirical fact. Dr. Guha's deposition testimony indicates that he did not make adjustments or account for calls for service when constructing his arrest tabulations, summaries and census benchmarks.

Q. For any offense code listed in Appendix B, did you take into account the percentage of the arrests that were a result of a call in as opposed to the sheriff's deputy just observing something when they were out and about?

¹⁶ See April 18, 2018 Deposition of Dr. Guha, Pg. 157 Ln. 25, Pg. 158 Ln. 1-7

MS. SIVASHANKER: Objection to form. I think he answered.

A. I think I answered the question. That is not what that analysis is. I explained to you what a row of data is, it is data, name, sex, race, an offense code. That is what is being circulated here.

Q. And that row of data does not indicate whether it's a result of a citizen call or not, right?

MS. SIVASHANKER: Objection to form.

A. That's correct.

Q. You did not go back and look at underlying incident reports to determine if it was a result of a citizen call, did you?

A. I did not.¹⁷

Dr. Guha further testified:

Q. With regard to Appendix B, let's look at page 1, you see simple domestic violence down about halfway, offense code 9737 (3)?

A. Yes, I do.

Q. There were 399 total arrests, do you know what percentage of those 399 arrests were the result of a call for assistance from a person in Madison County and the sheriff's department responded as opposed to arrests just made because the sheriff's department saw something happen?

MS. SIVASHANKER: Objection to form.

A. I have not done that calculation.¹⁸

¹⁷ See April 18, 2018 Deposition of Dr. Guha, Pg. 128 Ln. 13-25, Pg. 129 Ln. 1-10.

¹⁸ See April 18, 2018 Deposition of Dr. Guha, Pg. 125 Ln. 3-17.

41. MCSD Computer-Aided Dispatch (CAD) data clearly shows that the calls for police service varies throughout Madison County. Many areas of Madison County that have a high proportion of African-American residents make a disproportionately high number of calls for police service to report crimes, such as burglary and criminal activity. For instance, the area East of Canton that spans from approximately US-51 to MS-17 and encompasses Sharon and Farmhaven has a population that is approximately 69.5% African-American and 29.4% White according to census tract data.¹⁹ MCSD CAD report show that citizens in this area East of Canton make an average of 122 calls per 100 citizens in this area.

42. In contrast, the area in Eastern Madison County that spans from US-51 to Rice Road has a population that is approximately 10.9% African-American and 81.8% White.²⁰ MCSD calls for service show that citizens make an average of two calls per 100 citizens in this area. The pattern of disproportionately higher number of calls for service from African-American areas of Madison County is evident throughout the underlying data that Dr. Guha utilizes in his declaration and summary tabulations.

43. This pattern is even more pronounced for more serious property and personal crimes, such as burglary, assault, and murder. The disproportionately higher number of calls for service from African-American areas, and the likely higher level of arrests that result from those calls from service, is clearly a factor that MCSD, or any police agency, does not control. Dr. Guha's tabulations, which does not account for these factors, do not provide the court with any insights in this case.

¹⁹ Census Tract 309

²⁰ Census Tract 302.02

44. Finally, Dr. Guha inappropriately double counts arrests and citations throughout his tabulations. Dr. Guha's double counting can, and does, produce any number of inaccuracies and nonsensical calculations. In Dr. Guha's analysis, when an individual is arrested by MCSD Dr. Guha counts each separate offense that the person is charged with as a separate arrest. For instance, if an officer stops a person for making an improper turn and then finds that the individual is driving under the influence of alcohol and subsequently arrests him for DUI, Dr. Guha's analysis double counts this one arrest as two arrests. In his data tabulation, Dr. Guha will show one arrest for DUI and one arrest for improper turn. This problem is magnified in Dr. Guha's tabulations, since some of the offenses listed on the jail docket that Dr. Guha defines as an arrest were carried over from a previous arrest or run-in with law enforcement.

Q. If I'm pulled over at a traffic stop and I'm arrested on a certain date at a certain time for possession of marijuana and I'm charged with that offense code, and I'm also charged with not having a driver's license, and I'm also charged with not having my seatbelt on and I'm also charged with distribution of drugs based upon an outstanding warrant, would you count that as four arrests or one arrest?

MS. SIVASHANKER: Objection to form.

A. That would be four rows in the data. Those would not be removed. All four rows would remain in the data set because the offense codes are different.

Q. Even though I was just arrested one time?

MS. SIVASHANKER: Objection to form.

A. Yes.²¹

²¹ See April 18, 2018 Deposition of Dr. Guha, Pg. 105 Ln. 4-24.

45. Equally as troubling, Dr. Guha's tabulations double count instances where multiple arrests for the same offense occurred during the adjudication process. Dr. Guha treats each of these arrests during the different stages of the adjudication process as separate unique arrests, even though they are for the same offense. For instance, consider a person who is arrested for an offense in 2014, bailed out of jail, failed to appear in court, and is subsequently re-arrested for the initial offense in 2015. Dr. Guha's tabulations double count this instance and include the actual arrest for the offense in 2014 and an a separate, and clearly incorrect, arrest for the offense in 2015.

Q. Let's say I get arrested for aggravated assault and I'm taken to the jail and an entry is made in the jail docket and I bail out and then I get indicted and I'm arrested and another entry is made in the jail docket and I bail out again and then I get convicted and I'm arrested post-conviction and another entry is made in the jail docket. Would your data treat that as a duplicate, those three instances as a duplicates or would you treat it as three separate arrests?

MS. SIVASHANKER: Objection to form.

A. I think that depends on what the jail docket does with it. If it is all linked back to the original offense which in your example was aggravated assault, as I answered previously what I don't know is that when this particular data set a generated there are three arrests now, but they all pertain to one offense. What I don't know is whether in the data that I get, is that still one row of data or is three rows of data. The way the data is given to us it is not duplicate. As long as the dates are different that automatically is not clean. So it would remain in our data. What I don't know is if the way the jail docket generates this data set is if it treats it as one row of data. I would not do anything to remove the latter in your hypothetical example.

Q. Because they had different dates?

A. Correct.²²

Dr. Guha's tabulations of MCSD citation data is un insightful

46. Dr. Guha's tabulations of MCSD citation data is similarly flawed and provide no useful insights to help the Court examine the contents of that data. As with arrest, Dr. Guha's citation tabulations compare the racial distribution of the individuals who received citations for traffic violations such as speeding, careless driving, and improper equipment. Dr. Guha uses the general population of people of all ages in Madison County as his Census benchmark for the citation tabulations that he presents in his declaration. In brief, Dr. Guha's tabulations do not distinguish between the overall Madison County population and the actual relevant driving population in Madison County. The census benchmarking methodology that he uses is not generally accepted among researchers as reliable and has been the subject of intense criticism and rebuke for over 15 years.²³ These issues are discussed in more detail in this section of the report.

47. Specifically, comparing the racial distribution of the MCSD citations rate to the overall population in Madison County is simply wrong. It is a well established fact that the potential driving population in any given city or county at any given point in time can be substantially different from the overall population in the city or county. This fact is particularly magnified in a county that is as diverse as Madison County. Even a casual but closer look at the general census population data that Dr. Guha utilizes in his

²² See April 18, 2018 Deposition of Dr. Guha, Pg. 113 Ln. 6-25, Pg. 114 Ln. 1-13.

²³ See "By the Numbers: A Guide for Analyzing Race Data from Vehicle Stops", Fridell (2004).

tabulations, shows that the potential driving population is substantially different if one were to take into account even basic and generally accepted factors such as geographic location, vehicle availability, and driving age.

48. In his analysis, Dr. Guha uses a census benchmark of 38.4% for the African-American Madison County population in his tabulation. In contrast to Dr. Guha's tabulations, there is substantial variation within the Madison County racial demographics that is not reflected in the aggregated average population statistics that he uses in his summary tables. For example, there is a substantially larger percentage of African-Americans residing in Camden and the surrounding area (postal code 39045) than would be suggested by Dr. Guha's rudimentary census population benchmark. A look at the data shows that over 90.8% of the population is African-American, and not 38.4% as Dr. Guha assumes in his comparisons, in the Camden area. Accordingly, it is reasonable to expect that the number of citations given to African-Americans could be higher in areas where there are more African-American drivers on the road all other factors being equal.

49. The problems with Dr. Guha's tabulations are compounded by his failure to account for even basic factors such as potential vehicle availability rates or even driving age in his analyses. Clearly, as Dr. Guha does in his summary declaration, including individuals who are not of driving age in an analysis of traffic citations is inappropriate. Factors related to commuting patterns and the time of day of the stop further underscore the lack of reliability of Dr. Guha's tabulations.

50. Dr. Guha compounds these problems by using an artificial census population baseline that is not even based on the year that the citation was issued. According to his declaration, he bases his calculations of the Madison County population on the population of the county as of July 1, 2016. He then uses this census benchmark to compare the different types of citations for all years from 2012 to 2017. It is well known that counties and cities, and their sub areas, are generally not static in population as Dr. Guha's census benchmark suggests. Some areas of Madison County have gained more African-American residents while others have experienced a decrease in African-American inhabitants.

51. In short, Dr. Guha makes no attempt to compare the racial distribution of the citations issued by MCSD to the racial distribution of the motorists who are actually driving on Madison County roads and potentially are at risk of receiving a citation. Instead of comparing citations to the actual traffic on Madison County roads, Dr. Guha's tabulations compare the citations to population data of all ages who live in Madison County. The literature in this area of research is abundant and clearly states that citations need to be compared to the population at risk of being cited and not the general population at large.²⁴

Conclusions

²⁴ The literature also indicates there are differences in traffic behavior and use of safety equipment between different racial/ethnic groups. See for example (1) Hamdan, Huda, 2013, "Racial/Ethnic Differences in Fatality Rates from Motor Vehicle Crashes: An Analysis from a Behavioral and Cultural Perspective", (2) "Race and Ethnicity in Fatal Motor Vehicle Crashes 1999 - 2004: NHTS Technical Report", 2016.

52. In sum, it is my opinion that Dr. Guha's arrest and citation tabulations provide no useful insights in this case. In contrast to his assertions, the data summaries and tabulations that Dr. Guha presents are not objective, generally accepted calculations designed to help "the Court to examine the contents of these data and document sets." Instead, Dr. Guha is clearly performing a statistical analysis of MCSD data based on census benchmarks, assumptions, and methodologies that he has chosen to employ in this case. Dr. Guha's tabulations and summaries are clearly designed to create the impression that African-Americans are disproportionately arrested and cited by MCSD. However, as was discussed, Dr. Guha provides no context or understanding of the underlying data to help the Court understand his tabulations and summaries of MCSD arrest and citations data. The census benchmarking methodology that Dr. Guha explicitly states that he is utilizing to summarize the data in this case has been debunked by law enforcement and police racial profiling researchers for years.



Dwight D. Steward

Exhibit A: Curriculum Vitae



Economic & Statistical Research
Employment | Wage & Hour | Damages



Dwight Steward, Ph.D.
Economist and Statistician

Dr. Dwight Steward is an expert in the economic and statistical analysis of labor and employment related issues. He has experience in cases involving employment discrimination, wage and hour, lost earnings, and lost profits litigation.

As an expert witness, he has authored hundreds of reports, been deposed in over 200 cases and testified in over 60 trials. He has also testified in hearings, arbitrations, city council meetings, and before the Texas State legislature.

Dr. Steward writes regularly on employment related issues and frequently speaks to economic and legal professional groups. Dr. Steward's research on the statistical analysis of police racial profiling has received national attention. Dr. Steward has also taught in the University of Texas in the Department of Economics and the Red McCombs School of Business and in the College of Business at Sam Houston State University. He has taught numerous courses in statistics, labor economics, corporate finance, business policies, and the economics of the firm (microeconomics).

EDUCATION

Ph.D., Economics, University of Iowa; Dissertation title: 'Bank Mergers and Managerial Efficiency'

B.A., Economics, University of Texas at Austin; earned U.S. Army Officer Commission – Field Artillery

SELECTED ACTIVITIES

Visiting Scholar, University of Texas at Austin, Department of Economics, 2011-2012

President, University of Texas Army ROTC Alumni Association (Caissons), 2007-2009

Fellow, Texas Labor and Employee Relations Consortium, 2011 to present

Member, American Economic Association, Society for Human Resource Management, and National Association of Forensic Economists

Member, Beta Gamma Sigma Business Honor Society

Dissertation Scholar Fellow, Federal Reserve Bank of Atlanta, 1995

Field Artillery Officer, U.S. Army Reserve, 1990-1998, Honorably discharged; rank of First Lieutenant

EMPLOYMENT

Principal, EmployStats, 2008-present

Senior Lecturer, University of Texas at Austin, Department of Economics, 2010-2013, 1997-2003

Practice Director, Econ One, 2005-2008

Principal, Steward Research Group, 1997-2005

Senior Lecturer, University of Texas at Austin, Department of Economics, 1997-2003

Visiting Assistant Professor, College of Business, Sam Houston University, 1997-1999

Economist, Welch Consulting, 1995-1997

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Expert witness testimony list, full listing of speaking engagements, and writings available on request

EXHIBIT 3



Expert Witness Testimony Listing

Dwight Steward, Ph.D.

Balapuwaduge Mendis, on his own behalf and on behalf of all others similarly situated v. Schneider National Carriers, Inc., a Nevada Corporation, United States District Court Western District of Washington, deposition testimony February 2018.

Richard Patton v. Houston Independent School District, In the District Court of Harris County, Texas 295th Judicial District, deposition testimony January 2018.

Mandy Thompson and Kevin Torrez, individually and as next friends and representatives of Ayden Torrez, a minor v. St. David's Healthcare Partnership, L.P., LLP, d/b/a St. David's Medical Center; Jeff E. Hagen, M.D.; Jeff E. Hagen, M.D., P.A., d/b/a Austin OBGYN; and Maria E. Gutierrez, RNC, NP, MSN, In the District Court Travis County, Texas 353rd Judicial District, deposition testimony January 2018.

Jose Luis Alcantar, on behalf of himself and all others similarly situated v. Hobart Service, Hobart Food Equipment Group, Itw Food Equipment Group, LLC, and Does 1 through 100, inclusive, United States District Court, Central District of California, deposition testimony December 2017.

Karen Cunningham, Individually, as Heir at Law, and as Representative of the Estate of Steven Cunningham, Deceased; Sami Staley; Beatrice Cunningham; Jonathan Vigil; Andrew Tkaczyk; Zachary Johnson; James Riley; Timothy Irons; Charles Billings; Nathan Wilden; Christopher Davis; and Armando Cardona; and Daniel Luppino v. Nikki Hoke, as Representative of the Estate of Gregory M. Hoke, Deceased; Bordur Studios Coach Leasing LLC; and Big Sexy Grey Bus LLC; and Nikki Hoke, Individually, as Representative of the Estate of Gregory M. Hoke, Deceased, and as Next Friend of E.H. and H.H., minor children of Gregory M. Hoke, Deborah Hoke, Individually, and Russel Hoke, Individually v. Bridgestone Americas Tire Operations, LLC, a foreign Company which is the successor to Bridgestone/Firestone North American Tire, LLC, In the District Court of Hudspeth County, Texas 394th Judicial District, deposition testimony November 2017.

Jose F. Andino, individually and on behalf of himself and others similarly situated v. Kaiser Foundation Hospitals, a California Corporation, and Does 1 through 100, inclusive, Superior Court of the State of California For the County of Alameda, deposition testimony October 2017.

Jeffrey Fadness v. Charter Communications, Inc., In the District Court Travis County, Texas 261st Judicial District, deposition testimony October 2017.

Paris Shoots, Jonathan bell, Maxwell Turner, Tammy hope, Phillipp Ostrovsky, Brenda Brandt, Anissa Sanders, Najai McCutcheon, and Leticia Rodriquez, on behalf of themselves, the Proposed Rule 23 Classes and others similarly situated, v. IQOR Holdings, Inc., United States District Court District of Minnesota, deposition testimony August 2017.

Timothy K. Sargis and Dawn M. Sargis, Individually and as Next Friends of Madisyn Marie Loher, A Minor and as Personal representatives of the Estate of Michelle Loher, and Gary S. Loher, II v. HS Centex Trucking, LLC, Kevin Clay and USAA General Indemnity Company, In the District Court Coryell County, Texas 52nd Judicial District March 2017.

Stacey Burkhart and Brandon Burkhart Individually and As Parents and Next Friends of Austin Burkhart, a Minor v. United Regional Health Care System, Inc. d/b/a United Regional Hospital, United Regional Hospital, Texoma Women's Clinic, P.A. d/b/a The Women's Center, and Lawrence Y.H. Young, M.D., In the District Court 78th Judicial District Wichita County, Texas November 2016

Troy Slack, Jacob Grismer, Richard Erickson, Scott Praye, Gary H. Roberts, Robert P. Ullrich, Henry Ledesma, Timothy Helmick, Dennis Stuber, Eric Dublinkski, Sean P. Forney v. Swift Transportation Co., of Arizona, LLC., United States District Court Western District of Washington at Tacoma, deposition testimony November 2016

Richard Trusz v. UBS Realty Investors LLC and UBS AG, United States District Court District of Connecticut, deposition testimony September 2016

Amy L. Schneider and Janet E. Breneman, individually and on behalf of others similarly situated, v. Union Hospital, Inc., United States District Court Southern District of Indiana Terre Haute Division, deposition testimony June 2016

Corey Khansari, Debra Khansari and Michael Khansari v. The City of Houston, Chief of Police Charles A. McClelland, Jr., Officer William E. Rutherford, Officer Candace M. Bradshaw Vaughn, Officer Jillian McGowan, Officer Maria Hernandez, Officer Sean Hunter, Officer Jorge Luis Herrera, and Officer Walter Gaw, United States District Court Southern District of Texas Houston Division, trial testimony April 2016

Donald and Mary Trichel, individually and as Next Friends of Nicholas Trichel v. Union Pacific Railroad Company and Jeremy Ray Hampton, In the District Court of Harris County, Texas 125th Judicial District, deposition testimony April 2016

Virginia Nester and Robert Scott Nester, Individually and As Next Friends of C.N. and S.N., Minors v. Textron, Inc. d/b/a E-Z-GO United Rentals, Inc. f/k/a RSC Holdings, Inc. and/or RSC Equipment Rental, In the United States District Court for the Western District of Texas Austin Division, trial testimony March 2016

Chris Elliott O/B/O Himself and O/B/O All Other Similarly Situated, v. Schlumberger Technology Corporation and Schlumberger Limited (Schlumberger N.V.), United States District Court for the District of North Dakota Southeastern Division, deposition testimony March 2016

United States of America, ex rel. Louis Scutellaro v. Capitol Supply, Inc., United States District Court District of Columbia, deposition testimony February 2016

Monica Hague v. University of Texas Health Science Center at San Antonio, In the United States District Court for the Western District of Texas San Antonio Division, trial testimony January 2016

Arleen Delaronde v. Legend Classic Homes, Ltd., Bella Vista C.M.I., Ltd., In the United States District Court for the Southern District of Texas Houston Division, trial testimony December 2015

Genoveva Guzman and Abel Ochoa, Individually and as Parents and Next Friend of Maria Guadalupe Ochoa v. Tenet Healthcare Corporation, Hughan Frederick, M.D., Isis Obstetrics & Gynecology, LLC, A. Ellery, RN, North Fulton Hospitalist Group, LLC D/B/A North Fulton Regional Hospital A/K/A Tenet North Fulton Hospital, and John Does 1-10, In the State Court of Fulton County, State of Georgia, deposition testimony September 2015

Jose Arellano and Juan Montoya, individually, and on behalf of all others similarly situated v. Container Connection of Southern California, Inc., a California Corporation; and Does 1 through 100, Superior Court of the State of California for the County of Los Angeles, deposition testimony September 2015

Monica Hague v. University of Texas Health Science Center at San Antonio, In the United States District Court for the Western District of Texas San Antonio Division, deposition testimony August 2015

Jesus Holguin, Individually and o/b/o The Estate of Maria E. Holguin, Deceased, Estevan A. Gonzales, Jesus Ramon Holguin and Kassandra M. Holguin, Minor Children v. Baptist St. Anthony Health System, In the District Court of Potter County, Texas, deposition testimony July 2015

Mark Virant v. Encana Oil & Gas (USA), Inc. and Eric Marsh, Individually, In the District Court of Tarrant County, Texas 153 Judicial District, deposition testimony July 2015

Fred Devries, Ruby Teich, Janine Natoli, Rafael Santiago, Mark Malter, Adam Schwartz, individually and on behalf all others similarly situated v. Morgan Stanley & Co. LLC, f/k/a Morgan Stanley & Co. Incorporated, Morgan Stanley Smith Barney LLC, and Morgan Stanley, In the United States District Court for the Southern District of Florida, deposition testimony July 2015

Virginia Nester and Robert Scott Nester, Individually and As Next Friends of C.N. and S.N., Minors v. Textron, Inc. d/b/a E-Z-Go, United Rentals, Inc. f/k/a RSC Holdings, Inc. and/or RSC Holdings, Inc. and/or RSC Equipment Rental, In the United States District Court for the western District of Texas Austin Division, deposition testimony June 2015

Lisa Rindfleisch, Tiffany Melendez, Michelle Gentile, Laurie Baker and Christina Nelmes, on behalf of themselves and other similarly situated, v. Gentiva Health Services, Inc., In the United States District Court for the Eastern District of New York, deposition testimony June 2015

Karen Oubre, Individually and o/b/o The Estate of Larry Oubre, Deceased v. Kyle Mezger, M.D.; Christopher Thu, M.D.; and Capitol Anesthesiology Association, In the District Court of Travis County, Texas 126th Judicial District, Texas deposition testimony May 2015

Weird Times, LLC v. Sharon Ma and Doug Ma, In the District Court 353rd Judicial District Travis County, Texas, trial testimony March 2015

Armida Rodriguez and Chea Hill, individually, and on behalf of all other similarly situated and on behalf of the general public, vs. Burlington Coat Factory Warehouse Corporation, a New Jersey Corporation; Burlington Coat Factory of California LLC, a California Limited Liability Company; and Does 1 through 50, inclusive, United States District Court - Central District of California, deposition testimony February 2015

Guang Tian, Yan Nie, Jing Jian Wu, Zhen Sheng Yin, Tie Quan Ma, as individuals, and Ming Fang Tie, Yu Hong Chang, Yi Wu, Bao Jie Zhang, Chao Hui Liu, on Behalf of Themselves and all others similarly situated, and Christopher Cavaliere and Steven Lee, on behalf of themselves and as PAGA representatives v. Ma Laboratories, Inc., Abraham C. Ma, also known as Chih Keng Ma, and Christine Rao, also known as Ruiting C. Rao, Superior Court of the State of California County of Santa Clara Unlimited Jurisdiction, deposition testimony January 2015

Uzoamaka Enezuagu; Yoseph Awlachew; Kiflom Birhane; Desalgne Zema; Simon Gebrekiros; Jacqueline Jackson; Abebech Kassie; Abdou Ouedraogo; Raquel Pryce-King; Ephrem Tessema; Yonas Woldemicael; Shamara Wright; Helen Zegeye; Alemayehu Zeleke; Jekeia Sledge; Ann-Marie Glanville; Alex Garrett; Sara Kebeta; Getnet Retta; Emmanuel Vincent; Tatek Zema v. Board of Trustees of the University and Does 1 through 10 inclusive, Superior Court of the District of Columbia Civil Division, deposition testimony November 2014

Sergio Gutierrez, an individual; Hector Salazar, an individual, both individually on behalf of themselves and on behalf of all other similarly situated current and former employees of Defendant Commerce Casino v. California Commerce Club, Inc. doing business as Commerce Casino, and Does 1 through 50, inclusive, Superior Court of the State of California for the County of Los Angeles, deposition testimony November 2014

Yvette Anderson, et al., v. County of Ventura; and Does 1-10, inclusive, United States District Court, Central District of California, deposition testimony July 2014

Jesus Castro Romo v. The United States of America, United States District Court, District of Arizona, trial testimony July 2014

Ngan Huynh and Tuan M. Nguyen Individually and As Parents, Legal Guardians and Next Friends of Jonathan Nguyen, A Minor v. St. David's Healthcare Partnership, L.P.; LLP Individually and d/b/a St. David's North Austin Medical Center a/k/a North Austin Medical Center; Round Rock Hospital, Inc.; St. David's Foundation p/k/a St. David's Health Care System, Inc.; Renaissance Women's Group, P.A.; Tara A. Mills, M.D.; Devin M. Garza, M.D.; Kristen Barkow a/k/a Kristen Calnan, NP, In the District Court Travis County, Texas, 200th Judicial District, deposition testimony July 2014

Veronica Ochoa Valenzuela and Cesar De Viana, husband and wife v. Ford Motor Company, a Foreign Corporation, In the United States District Court for the District of Arizona, trial testimony May 2014

Johnson, et al v. York Claims Service, Inc., Superior Court of the State of California in and for the County of Sacramento, trial testimony May 2014

Michael Mercieca v. Tracey Rummel, and Microsoft Corporation, In the District Court 353rd Judicial District Travis County, Texas, trial testimony May 2014

Johnson, et al v. York Claims Service, Inc., Superior Court of the State of California in and for the County of Sacramento, deposition testimony April 2014

Yadira Hernandez v. R.E.S.A., Inc., d/b/a Keller Williams Realty and Carolina Salcedo Cuevas, In the District Court 131st Judicial District, Bexar County, Texas, trial testimony April 2014

Charles E. Amos, II v. Plan Administrator of Orion Healthcorp, Inc., Employee Benefit Plans, Orion Healthcorp, Inc., Employee Benefit Plans, Orion Healthcorp, Inc., RMI Physician Services Corporation, Chi T. "Cindy" Luu, Kimberly Singleton, RMI Physician Services Corporation Employee Benefit Plans, Plan Administrator of RMI Physician Services Corporation Employee Benefit Plans, In the United States District Court for the Southern District of Texas Houston Division, deposition testimony April 2014

Gerald Bramlett, v. Dimensional Investment LLC before the American Arbitration Association, Austin, Texas, arbitration testimony February 2014

Gerald Bramlett, v. Dimensional Investment LLC before the American Arbitration Association, Austin, Texas, deposition testimony December 2013

Renee M. Hawkins, Individually and on behalf of others similarly situation v. Alorica, Incorporated, United States District Court for the Southern District of Indiana Terre Haute Division, deposition testimony December 2013

Jodi Soukup, Individually, and as Parent, Legal Guardian and Next Friend of Ryan Burford, A Minor v. Methodist Healthcare Ministries of South Texas, Inc. d/b/a Southwest Texas Methodist Hospital, and/or d/b/a or a/k/a/ Methodist Hospital; Columbia/HCA Healthcare Corporation of Central Texas; Methodist Healthcare Ministries of South Texas Inc.; Patricia K. Brougher, M.D. and Patricia K. Brougher, M.D., P.A., In the District Court 45th Judicial District Bexar County, Texas, deposition testimony December 2013

Ben Deason v. Jennifer Newsom, in the 145th District Court in and for the County of Nacogdoches County, Texas, deposition testimony October 2013

Tracy Windrum, Individually, as representative of the Estate of Lancer Windrum, and on behalf of her minor children Bethany Windrum, Jacob Windrum, and Holly Windrum v. Victor Kareh, M.D., Harpaul Gill, M.D., North Cypress Medical Center, North Cypress Medical Center Operating Company, GP, LLC, North Cypress Medical Center Operating Company, LTD and Coresource, Inc., In the District Court of Harris County, Texas, 133rd Judicial District, trial testimony October 2013

Victoria "Anna" Janssen v. O'Reilly Automotive Stores, Inc., In the United States District Court for the Northern District of Texas Wichita Falls Division, Wichita Falls, Texas, trial testimony September 2013

Denise K. Aguilar v. St. David's Healthcare Partnership, LP, LLC d/b/a South Austin Medical Center, American Arbitration Association, Austin, Texas, deposition testimony August 2013

Deann Hojnacki v. Trisun Healthcare, LLC, Arbitration Austin, Texas, deposition testimony August 2013

Yadira Hernandez v. R.E.S.A., Inc., D/B/A Keller Williams Realty and Carolina Salcedo Cuevas, In the District Court 131st Judicial District, Bexar County, Texas, deposition testimony May 2013

Y. Hoang Do, M.D. v. Texas Health and Human Services Commission, Office of Inspector General, Before the Health and Human Services Commission Appeals Division, Travis County, Texas, trial testimony May 2013

David Meyer, Individually and o/b/o The Estate of Doreen Rae Meyer, Deceased, Sunny Ruud, Brandy Cebula, and Jon Novitsky o/b/o Krystin Novitsky, Minor Child v. Stephen Bodi, P.A. and M.D.'s Cyber Clinic, P.A. D/B/A Northwest Diagnostic Clinic, In the District Court of Williamson County, Texas 368th Judicial District, deposition testimony March 2013

Instant Technology, LLC, an Illinois Limited Liability Company, v. Elizabeth Defazio, Laura Rehn, Megan Marker, Bethany Meek, Erin Bauer, Joel Katz, Andrea Katz, individuals and Connect Search, LLC, a Delaware Limited Liability Company, In the United States District Court for the Northern District of Illinois, Eastern Division, deposition testimony January 2013

United Biologics, LLC, D/B/A United Allergy Labs & Nicolas Hollis v. Texas Allergy, Asthma and Immunology Society; Stuart L. Abramson, MD, PHD; Wesley W. Stafford, MD; Theodore M. Freeman, MD; William R. McKenna, MD and Michael P. Vaughn, MD, PHD, In the District Court of Travis County, Texas 353rd Judicial District, deposition testimony January 2013

Lisa Rindfleisch, Tiffany Melendez, Michelle Gentile, Laurie Baker and Christina Nelmes, on behalf of themselves and others similarly situated, v. Gentiva Health Services, Inc., In the United States District Court Northern District of Georgia Atlanta Division, deposition testimony January 2013

Jose Luis Alcantar, on behalf of himself and all others similarly situated v. Hobart Service, et al., United States District Court for the Western District of Texas, deposition testimony January 2013

Certain Underwriters at Lloyd's London and Professional Liability Insurance Services, Inc. v. IMA of Kansas, Inc., In the District Court of Travis County, Texas 353rd Judicial District, trial testimony November 2012

Equal Employment Opportunity Commission v. Valero Refining – Texas LP, In the United State District Court for the Southern District of Texas Galveston Division, deposition testimony October 2012

United Biologics, LLC, Formerly d/b/a United Allergy Services, Formerly d/b/a United Allergy Labs & Nicolas Hollis v. Texas Allergy, Asthma and Immunology Society; Stuart L. Abramson, MD, PHD; Wesley W. Stafford, MD; Theodore M. Freeman, MD; William R. McKenna, MD, and Michael P. Vaughn, MD, PHD., In the District Court of Travis County, Texas 353rd Judicial District, deposition testimony October 2012

Y. Hoang Do, M.D. v. Texas Health and Human Services Commission, Office of Inspector General, before the Health and Human Services Commission Appeals Division, Texas, deposition testimony October 2012

Xochitl Segovia, v. Williams Brothers Construction Company, Inc., In the District Court of Harris County, Texas 333 Judicial District, trial testimony August 2012

ADP, Inc., a Delaware Corporation v. National Merchant Alliance, LLC, a Nevada Limited Liability Company, United States District Court for the Western District of Texas, deposition testimony June 2012

Dustin R. Thompson, v. J4 Development, LP, In the District Court of Travis County, Texas 200th Judicial District, deposition testimony June 2012

Certain Underwriters at Lloyd's London and Professional Liability Insurance Services, Inc. v. IMA of Kansas, Inc., In the District Court of Travis County, Texas 353rd Judicial District, deposition testimony May 2012

James R. Irion, III and Veniece M. Irion v. Sunrise Senior Living Management, Inc., D/B/A Brighton Gardens of Austin; and Prime Care Seven, LLC D/B/A Brighton Gardens of Austin, United States District Court Western District of Texas Austin Division, deposition testimony May 2012

Elsa Ortega on behalf of S.L.O. and J.L.O. minors, et al v. United States of America, Jose Vicente Gaytan-Alcaya, et al, v. United States of America; Elsa Ortega and John Doe Ortega, Husband and Wife, In the United States District Court for the District of Arizona, deposition testimony April 2012

William Kierre v. Gerry Lawler, M.D. and Hendrick Anesthesia Network, In the District Court of Taylor County 104th Judicial District, trial testimony April 2012

Dawn Leamon, v. KBR, Inc.; et al, In the United States District Court for the Southern District of Texas Houston Division deposition, testimony April 2012

Wilson Industries, L.P., v. Select Energy Services, LLC; and Bell Supply, LLC; In the District Court of Ector County, Texas 244th Judicial District, deposition testimony March 2012

Debra Nicholas v. San Antonio Water System, In the District Court 57th Judicial District Bexar County, Texas, trial testimony March 2012

Lielonnie R. Lewis v. Save Mart Supermarkets and Does One through Fifty, inclusive, Superior Court of the State of California in and for the County of Alameda, deposition testimony February 2012

Flordeliza Escano, Marila P. Maximo, Joel T. Catublas, and Penny Burney, on behalf of themselves and behalf of all other similarly situated, v. Kindred Healthcare Operating, Inc., a Delaware Corporation, Kindred Healthcare, Inc., a Delaware Corporation, Specialty Hospitals of Southern California, a business form unknown, and Does 1 through 100, United States District Court Central District of California (Western Division – Los Angeles), deposition testimony February 2012

Anthony Stout, on behalf of himself and others similarly situated, v. Universal Ensco, Inc., United States District Court Southern District of Texas Houston Division, deposition testimony November 2011

Lashone Purnell, as an individual and on behalf of all employees similarly situated, v. Sunrise Senior Living Management, Inc., and Does 1 through 50, inclusive, United States District Court Central District of California Southern Division, deposition testimony August 2011

Jamie Leigh Jones v. Halliburton Company d/b/a KBR Kellogg Brown & Root (KBR); Kellogg Brown & Root Services, Inc.; Kellogg Brown & Root International Inc.; Kellogg Brown & Root, LLC; Kellogg Brown & Root, Inc.; Kellogg Brown & Root Inc.; Kellogg Brown & Root, S. de R.L.; Kellogg Brown & Root (KBR), Inc.; KBR Technical Services, Inc.; Overseas Administrative Services, Ltd.; Eric Iler, Charles Boartz; Several John Doe Rapists and the United States of America, In the United States District Court for the Southern District of Texas (Houston Division), trial testimony June 2011

Debbie Goodwill, Individually and on Behalf of the Estate of Larry Goodwill, Cody Goodwill, and Wendy Christian v. United Parcel Service, Inc., et al, In the U.S. District Court for The Western District of Texas Austin Division, trial testimony June 2011

Veronica Ochoa Valenzuela and Cesar De Viana, husband and wife v. Ford Motor Company, a Foreign Corporation, In the United States District Court for the District of Arizona, deposition testimony May 2011

Jamie Leigh Jones v. Halliburton Company d/b/a KBR Kellogg Brown & Root (KBR); Kellogg Brown & Root Services, Inc.; Kellogg Brown & Root International Inc.; Kellogg Brown & Root, LLC; Kellogg Brown & Root, Inc.; Kellogg Brown & Root Inc.; Kellogg Brown & Root, S. de R.L.; Kellogg Brown & Root (KBR), Inc.; KBR Technical Services, Inc.; Overseas Administrative Services, Ltd.; Eric Iler, Charles Boartz; Several John Doe Rapists and the United States of America, In the United States District Court for the Southern District of Texas (Houston Division), deposition testimony May 2011

Michael L. Collier, Ph.D. v. Texas Tech University and John Whitmore in his Official Capacity, In the District Court 99th Judicial District Lubbock County, Texas, trial testimony May 2011

Debbie Goodwill, Individually and on Behalf of the Estate of Larry Goodwill, Cody Goodwill, and Wendy Christian Plaintiffs, Cecelia Center, Individually and as Administrator of the Estate of George Reagan Center Intervenors, v. United Parcel Service, Inc., Tire Centers, LLC d/b/a TCI, and The Goodyear Tire & Rubber Company, In the United States District Court for the Western District of Texas Austin Division, deposition testimony March 2011

Albert Kevin Martin, A/K/A Kevin Martin v. City of San Antonio and Its Agent, San Antonio Water System, In the District Court 224th Judicial District, Bexar County, Texas, trial testimony February 2011

Delanie Ney, v. iProfile, LLC, Accord Human Resources, Inc. Virgo Capital Fund I, LP, Hemanth Parasuram, Guhan Swaminathan and Arun Prakash, Arbitration Cause No. 701600042810, Austin, Texas, arbitration testimony January 2011

State of Texas ex rel., Ven-A-Care of the Florida Keys, Inc. v. Alparma USPD f/k/a Barrenational, Inc., Purepac Pharmaceutical Co., Actavis Mid Atlantic LLC, Actavis Elizabeth LLC, Barr Pharmaceuticals, Inc., Barr Laboratories, Inc., Duramed Pharmaceuticals, Inc., Pliva, Inc. f/k/a Sidmak Laboratories, Inc., Odyssey Pharmaceuticals, Inc., PAR Pharmaceutical, Inc., PAR Pharmaceutical Companies, Inc., Watson Pharmaceuticals, Inc., Watson Pharma, Inc. f/k/a Schein Pharmaceutical, Inc., Rugby Laboratories, Inc., Oclassen Pharmaceuticals, Inc., Marsam Pharmaceuticals, Inc., and Andrx Pharmaceuticals, Inc., In the District Court of Travis County, Texas, 419th Judicial District, trial testimony, January 2011

Kevin Blackwell and Amber Blackwell, Individually and As Next Friend of K.B. and S.B., Minors v. Nissan Motor CO., LTD. And Nissan North America, Inc., In the United States District Court for the Eastern District of Texas Beaumont Division, deposition testimony January 2011

Nicholas Tableriou, Individually, and as Administrator of the Estate of Jane Tableriou, Deceased, Nicole Tableriou, and Brett Tableriou v. John Marsden, M.D., Marsden One GP, LLC, Marsden One, LTD., Marsden Management, LLC, and The American Institute of Gastric Banding, LTD., D/B/A True Results, In the District Court Travis County, Texas 261st Judicial District, deposition testimony October 2010

Prudence Adams v. Centex Freight Lines, LLC, In the District Court Travis County, Texas Judicial District, trial testimony October 2010

Jeanette Eberhart; Hamilton Beaux O’Keady-Elicock; Howard Hill; and Philip Marc Orlow v. Frye Claims Consultation and Administration, Inc. a California Corporation, In the Superior Court of the State of California, Alameda County, deposition testimony September 2010

Shaunetta Eddings, individually and on behalf of a class of similarly situation individuals, v. Health Net, Inc., In the United States District Court for the Central District of California, deposition testimony September 2010

Equal Employment Opportunity Commission and Connie Beseda, v. Zachry Industrial, Inc. (San Antonio) F/K/A Zachry Construction Corporation, (San Antonio), In the United States District Court for the Western District of Texas San Antonio Division, deposition testimony September 2010

Candice Warde Rodriguez, Individually and on Behalf of Benjamin Wallace Rodriguez, a Minor, v. The United States of America, In the United States District Court, Eastern District of New York, deposition testimony August 2010

Ronica R. Tabor on behalf of herself and all others similarly situated, Dacia S. Gray on behalf of herself and all others similarly situated, v. Hilti, Inc. a Domestic For Profit Business Corporation, and Hilti of America, Inc., a Foreign For Profit Business Corporation, In the United States District Court for the Northern District of Oklahoma, deposition testimony August 2010

State of Texas ex rel., Ven-A-Care of the Florida Keys, Inc. v. Alparma USPD f/k/a Barrenational, Inc., Purepac Pharmaceutical Co., Actavis Mid Atlantic LLC, Actavis Elizabeth LLC, Barr Pharmaceuticals, Inc., Barr Laboratories, Inc., Duramed Pharmaceuticals, Inc., Pliva, Inc. f/k/a Sidmak Laboratories, Inc., Odyssey Pharmaceuticals, Inc., PAR Pharmaceutical, Inc., PAR Pharmaceutical Companies, Inc., Watson Pharmaceuticals, Inc., Watson Pharma, Inc. f/k/a Schein Pharmaceutical, Inc., Rugby Laboratories, Inc., Oclassen Pharmaceuticals, Inc., Marsam Pharmaceuticals, Inc., and Andrx Pharmaceuticals, Inc., In the District Court of Travis County, Texas, 419th Judicial District, deposition testimony July 2010

Randall Barnett v. City of Austin, et al.; 353rd Judicial District Court, Travis County, Texas, hearing testimony May 2010

Lugo, et al., v. Farmers Pride, In the United States District Court for the District of Pennsylvania, deposition testimony May 2010

William Kierre v. Gary Lawler, M.D. and Hendrick Anesthesia Network, In the District Court, Taylor County, Texas, 104th Judicial District, deposition testimony April 2010

Ann Otsuka, an individual and on behalf of all others similarly situated; Janis Keefe, an individual; Corinne Phipps, and individual; Justin Kiser, an individual; and Renee Davis v. Polo Ralph Lauren Corporation; Polo Retail, LLC; Polo Ralph Lauren Corporation, doing Business in California as Polo Retail Corporation; and Fashions Outlet of America, Inc., United States District Court Northern District of California, trial testimony March 2010

Wai Chan, On behalf of herself and all others similarly situated v. Wells Fargo Financial, Inc., In the United States District Court for the Western District of Missouri, deposition testimony February 2010

Billy Petty, Edward Petty and Amanda Stewart v. Devesh Ramnath, M.D., In the District Court Administratively transferred to the 95th Judicial District Dallas County, Texas, deposition testimony February 2010

Luna v. Weddington, In the District Court of Harris County, Texas Judicial District 234, trial testimony January 2010

Ann Otsuka, an individual and on behalf of all others similarly situated; Janis Keefe, an individual; Corinne Phipps, and individual; Justin Kiser, an individual; and Renee Davis v. Polo Ralph Lauren Corporation; Polo Retail, LLC; Polo Ralph Lauren Corporation, doing Business in California as Polo Retail Corporation; and Fashions Outlet of America, Inc., United States District Court Northern District of California, deposition testimony December 2009

Mark Scherer, Doug Paslay and Hazel Bailey, individually, and on behalf of all other similarly situated v. Duke Energy Fossil-Hydro California Inc., a Delaware Corporation, and Wood Group Power Operations, Inc. A Nevada Corporation and Does 1 to 50, in the Superior Court of the State of California, County of Los Angeles, deposition testimony December 2009

Michael K. McLennan, v. Applied Materials, Inc., United States District Court Western District of Texas Austin Division, deposition testimony December 2009

Wilfredo Cruz, Matthew Allbee, Guadalupe Varela, Raul Torres, and Ken Joseph, individually and on behalf of a class of similarly situation persons, v. Unilock Chicago, Inc., an Illinois Corporation, In the Circuit Court of the Sixteenth Judicial District Kane County, Illinois, deposition testimony December 2009

Daniel Friedenbach, Individually and on behalf of all survivors of the Estate of Lorie Frazier Friedenbach, v. Gary A. Croll, in the District Court of Dallas County, Texas, 14th Judicial District, deposition testimony November 2009

Fermin Cortez, et al., v. Nebraska Beef, Inc., and Nebraska Beef, LTD., David Chuol, et al., v. Nebraska Beef, LTD., The United States District Court For The District of Nebraska, deposition testimony November 2009

Jeff Gebenus and Wesley Chong, individuals, on behalf of themselves and others similarly situated v. Rite Aid Corporation, a Delaware corporation, and Thrifty Payless, Inc., a California Corporation, in the Superior Court Of Washington For King County, deposition testimony November 2009

Margaret A. Guerra v. San Antonio Water System; Pending in the 73rd Judicial District Court, Bexar County, Texas, deposition testimony September 2009

David and Esther Luna v. Lloyd Damon Weddington, M.D. and Diabetes Center of America, In The District Court Of Harris County, Texas, 234Th Judicial District, deposition testimony September 2009

Wilfredo Cruz, Matthew Albee, Guadalupe Varela And Raul Torres, Individually and on behalf of a class of similarly situated persons, v. Unilock Chicago, Inc., An Illinois Corporation, and Jonathon Harn, An Individual, In the Circuit Court Of Sixteenth Judicial District, Kane County, Illinois, deposition testimony September 2009

Kent Schmidt, v. KMS Retail-Ben White, LPKMS Retail Euless, LA, Kent Stainback, d/b/a The Stainback Organization, Pete Becerra, Jimmy Evans Company, Ltd., In The District Court, 345th Judicial District, Travis County, Texas, deposition testimony August 2009

Howard Hopkins et al, v. The First American Corporation And First American Real Estate Tax Service, In The United States District Court Of Texas, Fort Worth Division, deposition testimony July 2009

Westin Casuarina Las Vegas, Hotel, Casino & Spa v. The Coaching Center, LLC, Before The American Arbitration Association, Arbitration meeting June 2009

Billy Ray Tratree v. B.P. Pipelines, Inc., Kelley Gleason and Roy Bowden, in the United States District Court for the Southern District of Texas, deposition testimony June 2009

Kent Schmidt, v. KMS Retail-Ben White, LPKMS Retail Euless, LA, Kent Stainback, d/b/a The Stainback Organization, Pete Becerra, Jimmy Evans Company, Ltd., In The District Court, 345th Judicial District, Travis County, Texas, deposition testimony May 2009

Juan Manual Lopez-Verduzco, v. CTNA, et al Arizona Superior Court, County Of Maricopa, deposition testimony April 2009

James J. Byerlotzer v. Key Energy Services, Inc., In The District Court Of Harris County, Texas 55Th Judicial District, deposition testimony March 2009

David Liszt and Karen Liszt v. Richard B. Stovall, MD.; Luis Mignucci, MD., Individually and d/b/a Luis Mignucci, MD., P.A., and d/b/a NeuroSpine Surgical Consultants; and Medical Center of Plano; In the 219th District Court of Collin County, Texas, deposition testimony March 2009

Marie Popek, Individually and on Behalf of Those Similarly Situated, v. Allied Barton Security Services LLC, a Delaware Limited Liability Company; Allied Barton Security Services LP, a Delaware Limited Partnership; and Does 1 through 30, inclusive, Superior Court of the State of California for the County of San Francisco, CA., deposition testimony December 2008

Charles Heath Leiber v. IE Miller Service L.P., IE Miller-Fowler L.L.C., and Noah Charles Lawson, In the District Court 12th Judicial District of Grimes County, Texas, deposition testimony November 2008

Billy Ray Tratree v. B.P. Pipelines, Inc., Kelley Gleason and Roy Bowden, in the United States District Court for the Southern District of Texas, deposition testimony November 2008

Doris H. Gray, a married woman, v. Motorola, Inc., a Delaware Corporation, In the Superior Court in and for Maricopa County in the State of Arizona, deposition testimony November 2008

Fred Klecka v. Allstate Insurance Company and Kathleen Abed, In The District Court 37th Judicial District, Bexar County, Texas, trial testimony November 2008

Esteban Barron v. Larry Paul Hatter, Jr., And Estes Express Lines d/b/a Estes Express Lines, Inc., In The District Court, 146th Judicial District, Bell County, Texas, deposition testimony October, 2008

UNIVAR USA, Inc., v. Stacey B. Blanton, In The District Court Harris County, Texas 61st Judicial District, deposition testimony August 2008

Pedro Gonzalez v. City Of San Antonio, Acting By And Through Its Agent, City Public Service Board d/b/a CPS Energy, In The District Court 225th Judicial District Bexar County, trial testimony, San Antonio, Texas August 2008

Charles Young v. Brand Scaffold Services, LLC, In the Eastern District Court for the Eastern District of Texas, Beaumont Division, deposition testimony June 2008.

Al Scott, Individually And As Administrator Of The Estate Of Dottie Scott, Deceased, And Susan Scott And Sherri Scott v. Sandip V.Mathur, M.D. and Abilene Regional Medical Center In The 42nd Judicial District Court of Taylor County Texas, deposition testimony April 2008

International Association Of Firefighters, LOCAL 629 AFL-CIO, et al v. City Of Monroe, in the United States District Court, Western District Of Louisiana, Monroe Division, deposition testimony March 2008

Jennifer Jarmon and, Cassius Jarmon, Individually and as Co-Administrators of the estate of Cassidy Jarmon, Deceased, and as Next Friends to Callie Jarmon, a minor child v. Delbert J. Davison, Old American County Mutual, Prine Towing and Recovery, Inc. COPART, Inc., and Daimler Chrysler Corporation, In the District Court, 412th Judicial District, Johnson County, Texas, deposition testimony February 2008

Veronica Ramirez Aguilar, Individually, as representative of the estate of Mario Islas Minero, and on behalf of all wrongful death beneficiaries v. Heart Employee Leasing, Inc. D/B/A and Heart HR, and S and D Plumbing- Taylor LLC, In the District Court of Travis County, Texas, 353rd Judicial District, deposition testimony January 2008

Rolando Garcia v. Design Werks, Inc., In the District Court of Travis County, 98th Judicial District, deposition testimony January 2008

Wilford Vogt, James P. Gauthier, and Humberto Reyna, Jr., for themselves and all others similarly-situated United States District Court, for the Northern District Of Texas Dallas, Dallas Division v. Texas Instruments Incorporated, deposition testimony November 2007

Randall Barnett, In The District Court, 353RD Judicial District v. City Of Austin, Powell Austin Properties, Ltd., Powell Holdings, Inc., Makota, Inc., and Alejandro Herrera, Travis County, Texas, deposition testimony November 2007

Cynthia S. Escamilla v. United Services Automobile Association, a Reciprocal, and Michael Barry, arbitration November 2007

Cynthia S. Escamilla v. United Services Automobile Association, a Reciprocal, and Michael Barry, deposition testimony October 2007

Jesus F. Diaz, Individually, as next friend of Marco A. Montoya and Racquel A. Diaz, minors and as dependent Co-Administrator of the Estate of Maria E. Diaz; James L. Caldwell, as dependent Co-Administrator of the Estate of Maria E. Diaz; Alejandro E. Diaz' and Isidora Gonzales v. General Motors Company, Autonation USA d/b/a Champion Chevrolet, H. E. Butt Grocery Company and Gilbert E. Delgado III in the Probate Court, Travis County Texas, deposition testimony August 2007

Angela Kay Warden, and husband, Brent Warden v. Wendell B. Ashby, MD, In The 108th District Court, Potter County, Texas, trial testimony May 2007

Angela Kay Warden, and husband, Brent Warden v. Wendell B. Ashby, MD, In The 108th District Court, Potter County, Texas, deposition testimony May 2007

William Montano and Doris Lucero v. Christmas By Krebs Corp., In The United States District Court For The District Of New Mexico, deposition testimony March 2007

Daniel J. Davis, III and Yvonne Davis v. Worthy Warnack, M.D., Britt T. Daniel, M.D. and Margaret Hollar, D.O.; In the District Court Dallas County, Texas 95th Judicial District, deposition testimony February 2007

Julian James, Individually, Daphne Bates Harrison, et al. v. Harris County Sheriff's Department, et al, In the United States Court for the Southern District of Texas, Houston Division, trial testimony January 2007

Sheila K. Robinson, Plaintiff, in the District Court of Brazos County, Texas v. Texas A&M University, Defendant in the 85th Judicial District, College Station, Texas, trial testimony January 2007

Viridiana Mata, Individually and Alejandro Rodriguez Individually, and all on Behalf of Genoveva Rodriguez, a Minor v. Mission Hospital and Heather A. Daley, M.D. 370th Judicial District in the District Court of Hidalgo County, Texas, deposition testimony December 2006

Billy Ray Tratree v. B.P. Pipelines, Inc.; In the United States District Court for the Southern District of Texas Houston Division, trial testimony October 2006

Julian James, Individually; Daphne Bates Harrison, Individually, et al. v. Harris County Sheriff's Department and William Wilkinson; In the United States District Court for the Southern District of Texas Houston Division, deposition October 2006

Texas Health and Human Services Commission, Medicaid and other Health and Human Services Fraud and Abuse Program Integrity - Legal Action Relating to Dr. Turner Lewis, M.D., administrative hearing September 2006

Billy Ray Tratree v. B.P. Pipelines, Inc.; In the United States District Court for the Southern District of Texas Houston Division, trial testimony August 2006

Julian James, Individually, Daphne Bates Harrison, et al., v. Harris County Sheriff's Department, et al, In the United States Court for the Southern District of Texas, Houston Division, testimony deposition March 2006

Michael Gibson v. Ondeo Nalco Energy Services, Inc. and Ondeo Nalco Company In the United States District Court for the Southern District of Texas, Houston Division, trial testimony February 2006

Frederick L. Risker v. Mahnaz Naveed Shah, M.D., Kelsey –Seybold Medical Group, P.A., and Gramercy Surgery Center, Ltd. D/B/A Gramercy Outpatient Surgery Center, deposition testimony November 2005

Larry Butler and Cathy Butler, Individually and on Behalf of Brittany Butler, a minor, and Erin Ferguson v. Kyle Kennedy, Russell Kennedy, Randi K. Kennedy, and Dana Harris, deposition testimony September 2005

Cheryl Smith, Individually and as Guardian and Next Friend of Michelle Smith, an Incapacitated Person v. Reyna Jean Noble, Ross Road Boring, Co., and Bobby L. Lambright, and Mark Huber, Individually and on Behalf of Jessica Huber, A Minor v. Ross Road Boring, Co., and Bobby L. Lambright, deposition and trial testimony August 2005

Amy Adkins v. Futurion Associates, Inc., deposition testimony August 2005

Jennifer Passi, Individually and a/n/f of Gracelyn Ann and Grant Michael Passi, Minor Children and as Representative of the Estate of Michael Vincent Passi, deceased v. Dr. Emery W. Dilling and Dr. Staton L. Awtrey; In Travis County, Texas, deposition testimony August 2005

Tanya Valdez, as next friend of Alejandro Ruben Pando, a minor and Lelia Alvarez, Individually and as representative of the estate of Ruben Pando, Jr., deceased v. Brinker Texas, L.P. D/B/A On The Border Mexican Grill & Cantina, Brinker Chili's Texas, Inc. D/B/A On The Border Mexican Café, Brinker International, Inc, Chili's Beverage Company, Inc., and Marlene Muniz as independent administrative and personal representative of the estate of Felipe Ornelas, Jr., deposition testimony 2005

Vanessa Sinegaure, Individually and as a Representative of the Estate of Darnell Eugene Sineguare v. Bally Total Fitness Corporation, et al; In the 334th Judicial District Court, Harris County, Texas, deposition and trial testimony 2005

Jerry L. Bigelow, Individually and as Next Friend of B.B., J.N.B., J.T.B. and S.B., Minors v. Living Picture AG, Living Picture Ltd., Living Picture GmbH and New York Lighter Co., Inc.; U.S. District Court, Western District of Texas, Austin Division, deposition testimony 2005

Suresh Dutta v. David Pistenmaa, In the United States District Court for the Northern District of Texas, Dallas Division, deposition and trial testimony 2005

Carrie Bennett, Individually as Representative of the Estate of Roy Edward Bennett, Deceased, and as Next Friend of Lane Edward Bennett, Cody Lee Bennett and April Anne Bennett v. Stephens Martin Paving, LP, Mobile Products, Inc. D/B/A Lay-Mor ; In the District Court, Taylor County, Texas, 42nd Judicial District, deposition testimony 2005

Robert Edwin Wills v. Sysco Food Services of Austin, L.P. and Rickey Charles Green In the 82nd Judicial District Court of Robertson County, Texas, deposition testimony 2005

Michael Gibson v. Ondo Nalco Energy Services, Inc. and Ondo Nalco Company; In the United States District Court for the Southern District of Texas, Houston Division, deposition testimony 2005

Regina Kelly, et al. v. John Paschall et al.; In the United States District Court for the Western District of Texas; Waco Division, deposition testimony 2004 and 2005

Charles White v. Technip USA Corporation and Technip, Inc.; In the 11th Judicial District Court of Harris County, Texas, deposition testimony 2005

Mike Arismendez and Elva Arismendez v. Covenant Health Systems d/b/a Covenant Medical Center; In the 237th District Court of Lubbock County, Texas, deposition testimony 2005

Linda Webb, Individually and on behalf of others similarly situated, v. Barnes Group Inc States District Court, Northern District of Texas, Dallas Division; Consolidated Case No. 3-02CV2716-Rm class certification 2004

Margia Blankenship, et al. v. Marathon Oil, In the District Court of Harris County 281st Judicial District, class certification 2004

Margia Blankenship, et al. v. Marathon Oil, In the District Court of Harris County 281st Judicial District, deposition testimony 2004

Janet Herdman, et al. v. El Paso Energy Corporation et al., In the District Court of Harris County, Texas 234 Judicial District, deposition testimony 2004

Sylvia Garcia and Rachel Garcia, Individually and on Behalf of the Estate of Richard Garcia, Deceased v. Ted L. Phipps, M.D. and The Lubbock Digestive Disease Associates, P.A. and Covenant Health Systems d/b/a Covenant Medical Center In The 237th District Court of Lubbock County, Texas, deposition testimony 2004

Benavides v. Cushman et al, In the District Court of Harris County, Texas; 280th Judicial District, trial testimony 2004

Jason Malone v. D.R. Horton – Emerald, Ltd.; In the 129th Judicial District Court of Harris County, Texas, deposition testimony 2003

Donald Castleberry and Mary Castleberry v. R. Douglas Mills, M.D., Nurse Jane Doe, St. David's Healthcare System, L.P. d/b/a North Austin Medical Center and Capital Emergency Associates; In The 353rd Judicial District Court of Travis County, Texas, deposition testimony 2003

Hammer Trucking, Inc. v. St. Paul Fire and Marine Insurance Company, et al.; In the 271st Judicial District Court of Wise County, Texas, deposition testimony 2003

Rodney Wayne Hurt, M.D. v. Southwest Lincoln Mercury, deposition testimony 2003

Juan T. Gonzales v. S & B Engineers and Contractors, Ltd.; In the District Court of Harris County, Texas; 280th Judicial District, deposition testimony 2003

John McKelvey and Lawanda McKelvey v. Arctic Pipe Inspection, Inc.; In the 333rd Judicial District Court, Harris County, Texas, deposition testimony 2003

Gwendolyn Mason v. American Electric Power/Central Power and Light Company, In the United States District Court, Western District, deposition testimony 2003

Linda Webb, Individually and on behalf of others similarly situated, v. Barnes Group Inc States District Court, Northern District of Texas, Dallas Division; Consolidated Case No. 3-02CV2716-R deposition testimony 2003

Clawson v. Michael Landess and Covert Ford; In the district court of Travis County, Texas, 345th judicial district, deposition testimony 2003

Juan T. Gonzales v. S & B Engineers and Contractors, Ltd.; In the District Court of Harris County, Texas; 280th Judicial District, trial testimony 2003

Benavides v. Cushman et al, In the District Court of Harris County, Texas; 280th Judicial District, trial testimony 2003

Gwendolyn Mason v. American Electric Power/Central Power and Light Company, In the United States District Court, Western District, trial testimony 2003

Mandy De Leon v. Ivan Melendez, M.D et al., In the District Court, Hidalgo County, Texas, 332nd Judicial District, deposition testimony 2002

Nicole Terry, et al. v. Qwest Communications, Inc., Santos Ruiz Castillo, and Hertz Equipment Rental, Inc.; In the 82nd District Court of Robertson County, Texas, deposition testimony 2002

Maria Hilda Rodriguez v. Emerson Electric Co et al., In the United States District Court for the Southern District of Texas, McAllen Division, deposition testimony 2002

In Re: Ambrocio Suarez, Jr., Deceased; In the Probate Court #2 of Harris County, Texas, deposition testimony 2002

Robert L. Hunt and Lisa S. Hunt v. Century 21 Ripley Realty, Robert H. Carroll and Sylvia K. Carroll; in the District Court Williamson County, Texas, 26th Judicial District, deposition testimony 2002

Marcelyn K. Boone, Individually, and on behalf of similarly situated persons, Plaintiff v. Union Carbide Corporation, Defendant; United States District Court, Southern District of Texas, Galveston Division, deposition testimony 2002

Thomas J. Galland v. David L. Winn; In the District Court of Williamson County, Texas, 368th Judicial District, deposition testimony 2002

Tranquilino C. Munoz v. Newtron, Inc. and John Grant, In the District Court, Jefferson County, Texas 60th Judicial District, deposition testimony 2002

Kirk Chi v. Dell Computer Corporation; In the United States District Court, Western District of Texas, deposition testimony 2002

Pablo Reyes v. Glesby Marks Corporation; Atlas Air Conditioning Company, L.P.; Comfort Systems U.S.A., Inc.; Atlas-Accurate Holdings, L.L.C. and John Bolan; In the District Court of Harris County, Texas, 189th Judicial District, deposition testimony 2002

Gwendolyn Mason v. American Electric Power/Central Power and Light Company; In the Southern District of Texas, Corpus Christi Division, deposition and trial testimony 2002

Dario Ibarra v. Pat Haas, d/b/a Patrick Haas Construction and Barton Creek Lakeside, LLC, in the 345th Judicial District Court of Travis County, Texas, Personal Injury, deposition testimony 2002

Benavides v. Cushman et al, In the District Court of Harris County, Texas; 280th Judicial District, deposition testimony 2002

Alcatel USA, Inc. v. Cisco Systems, Inc., In the United States District Court for the Eastern District of Texas, Sherman Division, deposition testimony 2002

Thomas J. Galland v. David L. Winn; In the District Court of Williamson County, Texas, 368th Judicial District, trial testimony 2002

Mandy De Leon v. Ivan Melendez, M.D et al., In the District Court, Hidalgo County, Texas, 332nd Judicial District, trial testimony 2002

Juanita Fletcher v. City of Houston, In the 189th Judicial District Court, Harris County, Texas, trial testimony 2002

Keith Ferrell and Tracey Ware v Robert Robinson and the City of Houston, In the County Civil Court at Law Number One, Harris County, Texas, deposition testimony 2001

Barbara LaRoche v. Daughters of Charity Health Services of Austin, et al, In the 126th Judicial District Court of Travis County, Texas deposition testimony 2001

Brandenburg v. Georgetown Independent School District, United States District Court, Western District of Texas, trial testimony 2001

EEOC v. BP Amoco et al., In the United States District Court for the Southern District of Texas, Houston Division, deposition testimony 2000

Gomez v. United Parcel Service, United States District Court, Western District of Texas, deposition testimony 2000

Pineda v. The City of Houston, In the United States District Court for the Southern District of Texas, Houston Division, deposition testimony 2000

McDonald v. Dr. Sophia Burns, M.D., 268th District Court Fort Bend County, Texas, deposition testimony 2000

Michelle Toussaint v. Sonic Restaurant, In the 136th District Court of Jefferson County, Texas, deposition testimony 2000

Woolf v. Vincent, M.D., 9th District Court, Polk County Texas, deposition testimony 2000

Isaac Robinson as Next Friend of Chasity Amanda Robinson, Arizona Jackson and Earlean Murray, as Executive of the Estate of Ruby McDonald v. Dr. Sophia Burns, M.D. 268th District Court Fort Bend County, Texas, deposition testimony 2000

Olen Lovell III v. Texas Health Resources, Herman Methodist System, Arbitration Cause No. 1310010565, Dallas, Texas, arbitration 1999

Walker et al v. Facility Insurance Corporation, et al, In the District Court of Travis County, Texas 98th Judicial District, deposition testimony 1999

Milton Santiago v. American Airlines, Inc., In the 191st Judicial District Court, Dallas County, Texas, deposition testimony 1999

Brown v. Sysco, Inc., United States District Court, Western District of Texas, deposition testimony 1999

Walker et al v. Facility Insurance Corporation, et al, In the District Court of Travis County, Texas 98th Judicial District, Robinson/Daubert hearing testimony 1999

Mato v. Dr. Jack Baldauf, et.al, United States District Court, Western District of Texas, Austin, trial testimony 1999

Goode v. City of Austin and Fine Host Corp, United States District Court, Western District of Texas, deposition testimony 1998

Chambers v. Texas A&M et al., United States District Court, Western District of Texas, deposition testimony 1998

Chambers v. Texas A&M et al., United States District Court, Western District of Texas, trial testimony
1998

INVITED PRESENTATIONS AND PUBLIC SPEAKING ENGAGEMENTS

Eastern Economics Association Conference, “Risk Shifting by Employee Terminations and Layoffs”, Discussant, New York City February 2017

American Economics Association Annual Meeting, “Pitfalls of Forensic Economic Analysis: Employment”, San Francisco, California, January 3, 2016.

Eastern Economics Association Conference, “Extending the Econometric Model of Worklife Expectancy”, New York, New York, February 27, 2015.

Employment Law CLE, “What is wrong with this paycheck? Investigating allegations of FSLA and wage and hour violations using payroll, time and personnel records”, San Francisco, California, March 6, 2014

Employment Law CLE, “What is wrong with this paycheck? Investigating allegations of FSLA and wage and hour violations using payroll, time and personnel records”, Oakland, California, March 5, 2014

Employment Law CLE, “What is wrong with this paycheck? Investigating allegations of FSLA and wage and hour violations using payroll, time and personnel records”, Century City, California, January 30, 2014

Fulbright & Jaworski LLP, “Use of Economic Experts in Employment Litigation”, Houston, Texas, April 18, 2013

Southern Economic Association Conference, “Economic Damage Valuations in South Africa”, New Orleans, Louisiana, November 17, 2012

Houston Bar Association, Employment Section “Back Pay and Front Pay Calculations in Employment Termination”, Houston, Texas, March 12, 2012

Allied Social Science Association Conference, Forensic Economics II “Household Services Production in Mexico”, Chicago, Illinois, January 7, 2012

Texas Labor & Employee Relations Consortium hosted by CenterPoint Energy, “Employee Labor Unions and EEO Compliance”, Houston, Texas, June 9, 2011

Allied Social Science Association Conference, “Using Economic, Statistical and Time Clock Evidence in Wage and Hour and Employment Lawsuits”, Chicago, Illinois, April 2011

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EmployStats - Dwight Steward, Ph.D.

EXHIBIT 3

Employment Law CLE, “Using Economic, Statistical and Time Clock Evidence in Wage and Hour and Employment Lawsuits”, San Francisco, California, March 4, 2011

Southern Economic Association Conference, “Calculating Economic Damages for Previously Incarcerated Individuals”, Atlanta, Georgia, November 21, 2010

Employment Law CLE, “Using Economic, Statistical and Time Clock Evidence in Wage and Hour and Employment Lawsuits”, Houston, Texas, October 21, 2010

Dallas Bar Association’s Friday Clinic, “Valuing Economic Damages in Injury, Wrongful Death and Employment Cases”, Dallas, Texas, September 10, 2010

American Association of Justice Annual Convention, “Evaluating Damages for the Incarcerated”, Vancouver, Canada, July 2010

Academy of Economics and Finance, 37th Annual Meetings, “Valuing Employee Stock Options in a Breach of Contract Case”, Houston, Texas, February 2010

American Economic Association Meetings, “Valuing Employee Stock Options in a Breach of Contract Case”, Atlanta, Georgia, January 2010

Capital Area Paralegal Association CLE, “Valuing Economic Damages in Injury, Wrongful Death and Employment Cases”, Austin, Texas, October 28, 2009

UT CLE, The 15th Annual Labor and Employment Law Conference, Austin, Texas, May 29 - 30, 2008

NAACP 71st Texas Annual meeting, “Police Use of Force and Racial Profiling Panel Discussion”, McAllen, Texas, October 12, 2007

Western Economic Association International, Chairperson of Employment Discrimination and Wage and Hour Analysis Sessions, Seattle, Washington, June 29 – July 1, 2007

UT School of Law 14th Annual Employment Law CLE, Presented with Stephanie Botello, “Calculating, Proving, and Mitigating Damages Involving Re-employment”, Austin, Texas, May 17, 2007

Iowa Economic Alumni Workshop, Tippie College of Business, “How Long do Mexican Migrants Work in the U.S.?”, Iowa City, Iowa, April 21, 2007

Trialsmith CLE webinar series, “Calculating Economic Damages in Injury and Death Cases”, February 8, 2007

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EmployStats - Dwight Steward, Ph.D.

EXHIBIT 3

American Economic Association Annual Meeting, Session Chairperson, “Economic Issues in Estimating Damages in Commercial and Personal Injury Cases”, Chicago, Illinois, January 6, 2007

MADD National Diversity Forum II, speaker for “Profiling to Behavior” a moderated panel discussion, Dallas, Texas, May 16 – 18, 2006

Academy of Economics and Finance Meeting, “Valuing Employee Stock Option Grants in Litigation”, Houston, Texas, February 10, 2006

American Economic Association Annual Meeting, “Estimating the Work Life Expectancy of Undocumented Mexican Migrant Workers”, Boston, Massachusetts, January 2006

DRI 2005 Annual Meeting, speaker for employment law “Lies, Damn Lies, and Employment Statistics”, Chicago, Illinois, October 21, 2005

Labor and Employment Roundtable, sponsored by Texas Lawyer, August 31, 2005

Austin Business District Roundtable, ‘Economic Roundtable on the Future of the Austin and Texas Economy’, July, 2005

Iowa Alumni Workshop, Department of Economics, Tippie College of Business: “Economics and Economists in the U.S. Legal System: A View from the Trenches”, University of Iowa, April, 2005

Police Executive Research Forum: “Data Analysis Guidelines for Poststop Analyses”, Las Vegas and Kansas City; 2004

Texas State Capitol Media Press Conference – Study Release, “An Examination of Consent Searches and Contraband Hit Rates at Texas Traffic Stops”, Austin, Texas, 2005

Police Executive Research Forum, Racial Profiling Meeting: Denominator Conference, “Use of Census Data to Measure Racial Disparities in Traffic Stops”, Las Vegas, Nevada, 2004

Austin City Council Meeting, West University Area Rezoning, “Rezoning Austin’s West Campus, A Unique Opportunity for Smart Growth”, Austin, Texas, 2004

African-American Economic Legislative Forum, Hosted by Representative Senfronia Thompson, Roundtable Speaker, Texas State Capitol, Austin, Texas, 2004

North Texas Police Racial Profiling Conference, The University of Texas at Arlington, Center for Mexican American Studies, “The 2002 Racial Profiling Data Revisited: A Look to the Future”, Arlington, Texas 2004

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EXHIBIT 3

NAACP and LULAC Police - Community Town Hall Meeting, “A Look at Police Racial

Profiling Statistics in Fort Worth, Fort Worth, Texas, 2004

NAACP and LULAC Police - Community Town Hall Meeting, “A Look at Police Racial Profiling Statistics in Beaumont, Beaumont, Texas, 2004

NAACP and LULAC Police - Community Town Hall Meeting, “A Look at Police Racial Profiling Statistics in Houston, Houston, Texas, 2004

Texas State Capitol, Senator Royce West Legislative Roundtable of Police Racial Profiling Data Collection and SB 1074, Roundtable Speaker, Austin, Texas, 2004

Police - Community Relation Forum, “A Preliminary Look at Racial Profiling in Texas and the Huntsville Area”, Huntsville, Texas, 2003

Economic Issues in the African-American Forum, “The Roots of African-American Economic Progress”, Radio Program, KAZI, Austin, Texas 2003

Texas State Bar Advanced Employment Law CLE Seminar, “Lies, Damn Lies, and Statistics”, Houston, Texas, 2003

Haynes and Boone, LLP, “Use and [Misuse] of Economics in Economic Damage Calculations”, Austin, Texas, 2002

Texas Police Chief Forum on Racial Profiling, “Using Search Data and Stop Data to Measure Racial Profiling”, University of Texas at Austin, Austin, Texas, 2002

Texas State Capitol Press Conference - Study Release, “Selecting Racially Balanced Texas Juries”, Austin, Texas, 2003

Texas State Capitol, Press Conference-Study Release, “Cost savings and Efficiency in the Texas State Criminal Justice System”, Austin, Texas, 2003

PowerCenter, “Drug treatment programs and Cost Savings in Texas”, Houston, Texas, 2003

Texas State Senate Chambers, “Statistical Analysis of Police Racial Profiling Data”, Austin, Texas 2001

This Week with Senator West, Television show, Roundtable Discussion, Topic: “Detecting Racial Profiling”, Austin, Texas 2001

Texas State Capitol, Media Press Conference, “Release of NAACP Police Racial Profiling Study”, Austin, Texas, 2000

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EXHIBIT 3

College of Business Administration, Sam Houston State University, “Lending Discrimination”, Huntsville, Texas 1998

Federal Reserve Bank of Chicago; Moderator, “Detecting Lending Discrimination in Credit Markets”, Chicago, Illinois, 1997

Federal Reserve Board, “Bank Mergers and Managerial Efficiency”, Washington D.C, 1995

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EXHIBIT 3

PUBLIC TECHNICAL REPORTS, PUBLICATIONS AND WORKING PAPERS

“Statistical Analysis of Employment Data in Discrimination Lawsuits and EEO Audits: A statistical guide for attorneys, human resource professionals and EEO compliance personnel”, Econometrics Publishing, February 2010

“Back Pay and Front Pay Calculations in Employment Termination Cases: Accounting for re-employment and mitigation efforts” (Joint with Stephanie Botello, Ph.D.), 2008, available at Social Science Research Network

“Economic Damages Primer for Attorneys: The building blocks for valuing economic damages in personal injury, wrongful death, medical malpractice, and products liability cases”, (Joint with Charles Mahla, Ph.D., Michael Sadler, Ph.D., Chad Shirley, Ph.D., Doug Berg, Ph.D., et al.), Econ One Research, Inc., September 2007

“How Long do Mexican Migrants Work in the U.S.?” (Joint with Amy Raub and Jeannie Elliott), Journal of Forensic Economics, Volume XIX No. 2

“Evaluating the Statistical and Economic Significance of Statistical Evidence in Employment Discrimination Cases, Expert Evidence Report”, The Bureau of National Affairs, Inc., Vol. 5, No. 5; p. 117-119; March 7, 2005 and March 23, 2005

“Racial Differences in Interest Rates”, Midwestern Business and Economic Review, p. 9 – 24, Number 34, Fall 2004

“Lies, Damn Lies, and Statistics: A View from a Statistical Expert”, Texas State Bar Advanced Employment Law CLE Chapter 13.1, 2003

“Evaluating Statistical Evidence in Employment Discrimination Cases”, Expert Evidence Report, Bureau of National Affairs, p. 117-119.

“An Examination of Consent Searches and Contraband Hit Rates at Texas Traffic Stops”, (Co-Authored) Technical Report Prepared for NAACP, LULAC, and Texas Criminal Justice Reform Coalition 2005

“Racial Profiling: Texas Traffic Stops and Searches; A first look at the nation’s most comprehensive racial profiling dataset”, (Co-Authored) Technical Report Prepared for NAACP, LULAC, and Texas Criminal Justice Reform Coalition, 2004

“Re-Zoning Austin’s West Campus: A Unique Opportunity for Smart Growth”, Technical Report Prepared for the University Area Partners, 2004

“Drug Treatment Programs and Cost Savings in the Texas State Criminal Justice System”, Technical Report Prepared for Justice Policy Institute and NAACP Voter Fund, 2003

“A Statistical Methodology to Help Courts Select Racially Balanced Texas Juries”, Technical Report Prepared for the NAACP, 2003

“A5/2/2012Re-examination of Police Racial Profiling Using the Becker Model of Discrimination”, co-authors Doug Berg and John Maroney, Working paper, 2002

“A Fixed-Effects Discrete Choice Model of Racial Profiling in Police Vehicle Searches”, Working Paper, 2002

“A Preliminary Examination of Racial Profiling in Texas: A look at Police Search Rates in Texas”, (Co-Authored), Technical Report Prepared for the NAACP, 2000

“A Note: Bootstrap Standard Errors and Confidence Intervals for Weak Axiom of Cost Minimization (WACM) Based Managerial Efficiency Estimates”, Published Applied Economics Letters V.2., 1998

“Bank Mergers and Cost Efficiency”, Ph.D. Dissertation, University of Iowa, 1995

“Racial Differences in Interest Rates: A Cluster Analysis Approach”, Co-authors Doug Berg and Donald Bumpass (SHSU) (2002), Paper accepted for presentation at Economics and Finance Association, February 2003 meeting in Savannah, Georgia.



Employment | Wage and Hour | Economic Damages

Fee Schedule

<u>Personnel</u>	<u>Hourly Rate</u>
D. Steward	\$595
Economists (Ph.D. level)	\$275 - \$325
Senior Analysts (experienced BA and MA/MS level)	\$250
Analysts	\$195
Clerical and General Research Assistance	\$50 - \$75

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Effective November 7, 2017

EXHIBIT 3

Exhibit B: Documents

Num. Description

1.	[Arrest Warrant Data (4-17-2018)]/Jaildocket 01012012-09202017.csv
2.	[Arrest Warrant Data (4-17-2018)]/Justice Court warrant arrest 1 from 01012012.csv
3.	[Arrest Warrant Data (4-17-2018)]/Justice Court warrant arrest 2 from 01012012.csv
4.	[Arrest Warrant Data (4-17-2018)]/Warrant Module 01012012-09202017.csv
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7.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[Books and Academic Literature]/Bertrand (2011).pdf
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199.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Census Data]/[ACS_5YR_TRACT_EMPLOYMENT]/ACS_16_5YR_S2301_metadata.csv
200.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Census

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202.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Census Data]/[ACS_5YR_TRACT_EMPLOYMENT]/aff_download_readme_ann.txt
203.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Census Data]/[ACS_5YR_TRACT_HOUSING]/ACS_12_5YR_DP04_metadata.csv
204.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Census Data]/[ACS_5YR_TRACT_HOUSING]/ACS_12_5YR_DP04_with_ann.csv
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206.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Census Data]/[ACS_5YR_TRACT_HOUSING]/ACS_13_5YR_DP04_metadata.csv
207.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Census Data]/[ACS_5YR_TRACT_HOUSING]/ACS_13_5YR_DP04_with_ann.csv
208.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Census Data]/[ACS_5YR_TRACT_HOUSING]/ACS_13_5YR_DP04.txt
209.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Census Data]/[ACS_5YR_TRACT_HOUSING]/ACS_14_5YR_DP04_metadata.csv
210.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Census Data]/[ACS_5YR_TRACT_HOUSING]/ACS_14_5YR_DP04_with_ann.csv
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212.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Census Data]/[ACS_5YR_TRACT_HOUSING]/ACS_15_5YR_DP04_metadata.csv
213.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Census Data]/[ACS_5YR_TRACT_HOUSING]/ACS_15_5YR_DP04_with_ann.csv
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217.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Census Data]/[ACS_5YR_TRACT_HOUSING]/ACS_16_5YR_DP04.txt
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219.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Census Data]/[ACS_5YR_TRACT_INCOME]/ACS_12_5YR_B19013_metadata.csv
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249.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Census Data]/[ACS_5YR_TRACT_RACE]/ACS_16_5YR_B02001.txt
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251.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Roadblock Data]/[1_raw_data_files]/1_Master CAD Report - To Be Produced.csv
252.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Roadblock Data]/[1_raw_data_files]/2_Roadblock Locations (Handwritten).xlsx
253.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Roadblock Data]/[1_raw_data_files]/3_Unlisted Roadblocks.xlsx
254.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Roadblock Data]/[2_cleaned_addresses]/1_Raw CAD Data and Clean Address Tab.xlsx
255.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Roadblock Data]/[2_cleaned_addresses]/2_Roadblock Locations (Handwritten) - Raw Data and Formatted For R.xlsx
256.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting

	Materials]/[Expert Report Production File]/[data]/[1. input]/[Roadblock Data]/[2_cleaned_addresses]/3_Unlisted Roadblocks - Raw Data and Formatted For R.xlsx
257.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Roadblock Data]/[3_unique_addresses_geocoding_input]/1_Unique List of Clean Addresses From CAD.csv
258.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Roadblock Data]/[3_unique_addresses_geocoding_input]/2_ROAD~1.XLS
259.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Roadblock Data]/[3_unique_addresses_geocoding_input]/3_Unlisted Roadblocks - Unique List of Addresses.xlsx
260.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Roadblock Data]/[4_geocoding_output]/1_Geographic Coordinates For CAD Addresses.csv
261.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Roadblock Data]/[4_geocoding_output]/2_Geographic Coordinates for Roadblock Locations (Handwritten).xlsx
262.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Roadblock Data]/[4_geocoding_output]/3_Geographic Coordinates for Unlisted Roadblocks.csv
263.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Shape Files]/[ACS_2015_5YR_TRACT_28_MISSISSIPPI.gdb]/a00000001.freelist
264.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Shape Files]/[ACS_2015_5YR_TRACT_28_MISSISSIPPI.gdb]/a00000001.gdbindexes
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295.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[1. input]/[Shape Files]/[ACS_2015_5YR_TRACT_28_MISSISSIPPI.gdb]/a00000007.CatRelTypesByBackwardLabel.atx
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413.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[2. Datasets]/Imputed_Roadblocks_Mapped.csv
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416.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[2. Datasets]/regression_input.dta
417.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[2. Datasets]/Roadblocks Per Capita - Per Census Tract Group.xlsx
418.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[2. Datasets]/roadblocks_census_CAD.csv
419.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[2. Datasets]/unique_roadblocks.sas7bdat
420.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[2. Datasets]/Weighted Average Black Population Percentage 2012 to 2017 Per Census Tract.csv
421.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[2. Datasets]/Weighted Average Black Population Percentage Per Census Tract Group.csv
422.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[3. Output]/Appendix_C.xml
423.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[3. Output]/Exhibit 2.pdf
424.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting

	Materials]/[Expert Report Production File]/[data]/[3. Output]/Exhibit 3 - Map Without Text Boxes - From R.pdf
425.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[3. Output]/Exhibit 4.pdf
426.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[data]/[3. Output]/Exhibit_6.xml
427.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[Exhibits and Appendices]/Appendix C.xlsx
428.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[Exhibits and Appendices]/Exhibit 2.pdf
429.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[Exhibits and Appendices]/Exhibit 3.pdf
430.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[Exhibits and Appendices]/Exhibit 4.pdf
431.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[Exhibits and Appendices]/Exhibit 6.xlsx
432.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[Exhibits and Appendices]/Exhibits 1, 5.xlsx
433.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[Exhibits and Appendices]/Exhibits 1, 5.xlsx
434.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[Other]/Sobriety Checkpoint & Roadblock Policy.pdf
435.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/[Expert Report Production File]/[Publicly Available Sources]/US Census Bureau - Madison County Census Tract Map.pdf
436.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/Ricchetti Report Appendices.pdf
437.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/Ricchetti Report Exhibits.pdf
438.	[Class Certification 03142018]/[Expert Disclosures]/[Expert Report and Supporting Materials]/Ricchetti Report.pdf
439.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Code]/1. Import arrest data.sas
440.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Code]/2. Analyze arrest data.sas
441.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Code]/3. Import citations raw data and categorization.sas
442.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Code]/4. Analyze citations data.sas
443.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting

	materials]/[FRE 1006 Production File]/[Code]/5. Import and analyze incident report parsed results.sas
444.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Code]/header.sas
445.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[1. Input]/ACLU FOIA Request 02052018 V1.xlsx
446.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[1. Input]/ACLU12TO17.CSV
447.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[1. Input]/parsed_results.xlsx
448.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[1. Input]/Seatbelt Search - Flagging - For SAS.xlsx
449.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[2. Datasets]/aclu_foia_request_02052018.sas7bdat
450.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[2. Datasets]/arrests_raw.sas7bdat
451.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[2. Datasets]/categories_for_citations.sas7bdat
452.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[2. Datasets]/Citations Categories - For SAS.xlsx
453.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[2. Datasets]/parsed_results.sas7bdat
454.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[2. Datasets]/Seatbelt Search - Flagging - For SAS.xlsx
455.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[3. Output]/Incident Report Apartment Walkthroughs - From SAS.xlsx
456.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[3. Output]/Incident Report Roadblock Arrests - From SAS.xlsx
457.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[3. Output]/Incident Report Traffic Stops - From SAS.xlsx
458.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[3. Output]/Incident Report Traffic Stops Seatbelt Violation - From SAS.xlsx
459.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[3. Output]/Individuals Cited For Seatbelt Violation Only - From SAS.xlsx

460.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[3. Output]/Summary of Arrests by Offense Code - From SAS.xlsx
461.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[3. Output]/Summary of Citations by Violation Category - From SAS.xlsx
462.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[3. Output]/Summary of Total Arrests - From SAS.xlsx
463.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Data]/[3. Output]/Summary of Total Citations - From SAS.xlsx
464.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Exhibits and Appendices]/[Excel]/ARREST~2.XLS
465.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Exhibits and Appendices]/[Excel]/Arrests From Incident Reports Related to Apartment Walkthroughs.xlsx
466.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Exhibits and Appendices]/[Excel]/Arrests From Incident Reports Related to Stops at Roadblocks.xlsx
467.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Exhibits and Appendices]/[Excel]/Arrests From Incident Reports Related to Traffic Stops.xlsx
468.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Exhibits and Appendices]/[Excel]/Black Percentage of Arrests by Offense Code.xlsx
469.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Exhibits and Appendices]/[Excel]/Black Percentage of Citations and Summary of Citations by Violation Category.xlsx
470.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Exhibits and Appendices]/[Excel]/Individuals Cited For Seatbelt Violation Only.xlsx
471.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Exhibits and Appendices]/[Excel]/Summary of Arrests by Offense Code.xlsx
472.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Exhibits and Appendices]/[Excel]/Summary of Total Arrests.xlsx
473.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/[FRE 1006 Production File]/[Exhibits and Appendices]/[Excel]/Summary of Total Citations.xlsx
474.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting

	materials]/[FRE 1006 Production File]/[Publicly Available Sources]/US Census Bureau QuickFacts - Madison County, Mississippi.pdf
475.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/Guha Declaration Appendices.pdf
476.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/Guha Declaration Exhibits.pdf
477.	[Class Certification 03142018]/[Expert Disclosures]/[fre 1006 declaration and supporting materials]/Guha Summary Declaration.pdf
478.	[Class Certification 03142018]/[Pleadings]/231 Plaintiffs' Motion for Class Certification.pdf
479.	[Class Certification 03142018]/[Pleadings]/231-1.pdf
480.	[Class Certification 03142018]/[Pleadings]/231-10.pdf
481.	[Class Certification 03142018]/[Pleadings]/231-100.pdf
482.	[Class Certification 03142018]/[Pleadings]/231-101.pdf
483.	[Class Certification 03142018]/[Pleadings]/231-102.pdf
484.	[Class Certification 03142018]/[Pleadings]/231-103.pdf
485.	[Class Certification 03142018]/[Pleadings]/231-104.pdf
486.	[Class Certification 03142018]/[Pleadings]/231-105.pdf
487.	[Class Certification 03142018]/[Pleadings]/231-106.pdf
488.	[Class Certification 03142018]/[Pleadings]/231-107.pdf
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492.	[Class Certification 03142018]/[Pleadings]/231-110.pdf
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494.	[Class Certification 03142018]/[Pleadings]/231-112.pdf
495.	[Class Certification 03142018]/[Pleadings]/231-113.pdf
496.	[Class Certification 03142018]/[Pleadings]/231-12.pdf
497.	[Class Certification 03142018]/[Pleadings]/231-13.pdf
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504.	[Class Certification 03142018]/[Pleadings]/231-2.pdf

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516.	[Class Certification 03142018]/[Pleadings]/231-30.pdf
517.	[Class Certification 03142018]/[Pleadings]/231-31.pdf
518.	[Class Certification 03142018]/[Pleadings]/231-32.pdf
519.	[Class Certification 03142018]/[Pleadings]/231-33.pdf
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527.	[Class Certification 03142018]/[Pleadings]/231-40.pdf
528.	[Class Certification 03142018]/[Pleadings]/231-41.pdf
529.	[Class Certification 03142018]/[Pleadings]/231-42.pdf
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539.	[Class Certification 03142018]/[Pleadings]/231-51.pdf
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544.	[Class Certification 03142018]/[Pleadings]/231-56.pdf
545.	[Class Certification 03142018]/[Pleadings]/231-57.pdf
546.	[Class Certification 03142018]/[Pleadings]/231-58.pdf
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549.	[Class Certification 03142018]/[Pleadings]/231-60.pdf
550.	[Class Certification 03142018]/[Pleadings]/231-61.pdf
551.	[Class Certification 03142018]/[Pleadings]/231-62.pdf
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556.	[Class Certification 03142018]/[Pleadings]/231-67.pdf
557.	[Class Certification 03142018]/[Pleadings]/231-68.pdf
558.	[Class Certification 03142018]/[Pleadings]/231-69.pdf
559.	[Class Certification 03142018]/[Pleadings]/231-7.pdf
560.	[Class Certification 03142018]/[Pleadings]/231-70.pdf
561.	[Class Certification 03142018]/[Pleadings]/231-71.pdf
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563.	[Class Certification 03142018]/[Pleadings]/231-73.pdf
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566.	[Class Certification 03142018]/[Pleadings]/231-76.pdf
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572.	[Class Certification 03142018]/[Pleadings]/231-81.pdf

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590.	[Class Certification 03142018]/[Pleadings]/231-98.pdf
591.	[Class Certification 03142018]/[Pleadings]/231-99.pdf
592.	[Class Certification 03142018]/[Pleadings]/232 Memo.pdf
593.	[Guha Deposition]/Exhibit 1.pdf
594.	[Guha Deposition]/Exhibit 2.pdf
595.	[Guha Deposition]/Exhibit 3.pdf
596..	[Guha Deposition]/RAHUL K. GUHA,PH.D., ct.pdf
597.	[Guha Deposition]/RAHUL K. GUHA,PH.D., full.pdf
598.	[Ricchetti Deposition]/BRYAN RICCHETTI, PH.D., ct.pdf
599.	[Ricchetti Deposition]/BRYAN RICCHETTI, PH.D., full.pdf
600.	[Ricchetti Deposition]/Ricchetti 001.pdf
601.	[Ricchetti Deposition]/Ricchetti 002.pdf
602.	[Ricchetti Deposition]/Ricchetti 003.pdf
603.	[Ricchetti Deposition]/Ricchetti 004.pdf
604.	[Ricchetti Deposition]/Ricchetti 005.pdf
605.	[Ricchetti Deposition]/Ricchetti 006.pdf
606.	[Ricchetti Deposition]/Ricchetti 007.pdf

607.	[Ricchetti Deposition]/Ricchetti 008.pdf
608.	[Ricchetti Deposition]/Ricchetti 009.pdf
609.	[Ricchetti Deposition]/Ricchetti 010.pdf
610.	[Ricchetti Deposition]/Ricchetti 011.pdf
611.	[Ricchetti Deposition]/Ricchetti 012.pdf
612.	Agency Codes for Other Arrests in 2012-2017.csv
613.	Arrests 2012-2017 (Other Agencies Only).csv
614.	Complaint Searchable.pdf
615.	FY16 MOHS Grant Application.docx
616.	Jail Docket 2012-2017 (MCSO ARRESTS ONLY).CSV
617.	Madison County Justice Court Citations 2012-2017.xlsx
618.	Master CAD Report.csv
619.	Roadblock Locations from 1.1.12 through 8.24.17.csv
620.	US v Johnson II.pdf
621.	12-21-17 - Brown - Tucker - Compressed.pdf
622.	12-21-17 - Brown - Williams - Compressed.pdf
623.	12-21-17 - Brown - Sandridge - Compressed.pdf
624.	12-21-17 - Brown - Thompson - Compressed.pdf
625.	Declaration of Mark Sandridge
626.	2018 05 02 Letter to Defs. with Enclosure.pdf
627.	Letter to Kavitha Sivashanker 04252018.pdf

Exhibit C: Signed Declaration

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF MISSISSIPPI
NORTHERN DIVISION

LATOYA BROWN, et al.

PLAINTIFFS

v.

CIVIL ACTION NO. 3:17-cv-347 WHB LRA

MADISON COUNTY, MISSISSIPPI; et al.

DEFENDANTS

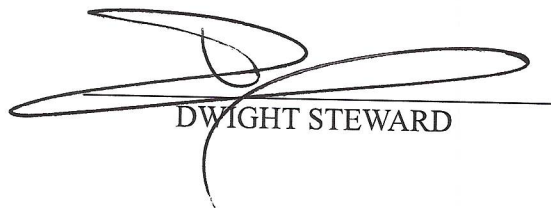
DECLARATION OF DWIGHT STEWARD

I, Dwight Steward, make the following declaration based on personal knowledge:

1. I have been retained by the Defendants in the above referenced matter as expert. I submit that the foregoing Report Regarding Dr. Rahul Guha's Declaration from May 8, 2018 is a true and accurate copy of the report I provided to Defendants in this matter. I declare that the information and opinions contained in the report are true and correct to the best of my knowledge.

I declare under penalty of perjury that the foregoing is true and correct. 28 U.S.C. § 1746.

May 8, 2018


DWIGHT STEWARD

Mark S. Dunston
PO Box 1706
Ocean Springs, MS 39566
(228) 348.1189

T. Russell Nobile
Wise Carter Child & Caraway, P.A.
2510 14th Street, Suite 1125
Gulfport, MS 39501

May 8, 2018

Mr. Nobile,

As requested, I have reviewed the materials you provided me in reference to *Brown, et.al. v. Madison County, et.al.* After reviewing those materials, I have reached certain opinions and offer the following:

1. Qualifications

- I am a certified law enforcement officer and trainer, beginning my career in law enforcement in 1984.
- In my career I have served as a patrol officer, a narcotics detective, academy trainer, academy director, SWAT team member, SWAT commander, sergeant, captain, and chief of police.
- As a law enforcement trainer, I have trained thousands of federal, state, and local law enforcement officers from every state in the United States, the territories of Puerto Rico and the U.S. Virgin Islands, and internationally, including Hong Kong, China, Canada and Brazil.
- I have trained law enforcement officers in person and through training media including television, video and written word on topics including police use of force, officer survival, and arrest procedures.
- As a law enforcement executive I have written, enacted and enforced numerous policies and procedures relative to the operation of a law enforcement agency.
- I am a graduate of the 191st session of the FBI National Academy.
- I am a graduate of the 20th Senior Management Institute for Police.
- I have authored numerous articles published in national law enforcement periodicals.
- I am the author of one book and contributing author to two additional books on law enforcement.
- My work has been cited in other authors' works.

- I have conducted, delivered and published research on issues concerning police use of force and officer survival.
- I have lectured and delivered research findings at national and international professional peer association conferences.
- I have testified in both state and federal court districts in five states on the topics of police and security procedures, use of force, and policy.
- I have included my curriculum vitae and fee schedule with this document

2. Testimony Previous Four Years

- McClain v. MS Highway Patrol
- Burton v. City of Jackson, MS and MS Bureau of Narcotics
- Williams V. City of Natchez, MS
- Gammel v. Coahoma Co. Community College, MS
- State of CA vs. Deputy Dayle Long
- Skinner v. Hinds CO SO, MS
- Salvato v. Marion CO, FL
- Hasskamp v. Orange CO, FL
- Brown v. Orange CO, FL
- Washington v. City of Waldo, FL
- State of MS v Terry Beadles
- Hale v City of Biloxi, MS
- Patel v. City of Madison, AL
- Perez v Collier Co., FL
- Hajali v. New Castle Co. and Daller
- Docher v St. Lucie County, FL

3. Material Reviewed

- Complaint
- Thomas' Second Request Supplemental Responses
- Tucker's Second Request Supplemental Responses
- Manning's Second Request Supplemental Responses
- Brown's Second Request Supplemental Responses
- Blackmon's Third Supplemental Responses
- Singleton's Second Supplemental Responses
- Manning's Second Supplemental Responses
- Smith's Second Supplemental Responses
- Pate Declaration
- Day Declaration
- Dr. Ricchetti's Expert Report
- Depositions:
 - Defendant's 30(b)6
 - Chandler

- Thomas
- Tucker
- Sullivan
- D. Smith
- Thompson
- Flax
- Gibson
- Williams
- Hall
- Waldrop
- Fish
- K. Manning
- Brown
- Blackmon
- Sandridge
- Singleton
- Griffin
- Q. Manning
- Sheriff Tucker
- Howard
- Moore
- S. Smith
- Wilson
- Jones
- Squires
- Baxter
- Weisenberger
- Lyons
- Loveall
- Barnes
- Freeman
- McDonald
- Dr. Ricchetti
- Dr. Guha
- Dr. Guha Declaration
- Affidavits
 - Spann
 - Harris
 - Hollins
 - Bracey
 - Tillman
 - Q. Smith
 - Davis
 - Thompson
 - Guise
 - Davis

- Carter
- McDonald
- Declarations
 - Blackmon
 - L. Brown
 - K. Manning
 - Q. Manning
 - N. Singleton
 - S. Smith
 - B. Thomas
 - B. Tucker
 - J. Bacon
 - M. Bracy
 - A. Brown
 - B. Brown
 - W. Carter
 - R. Davis
 - V. Davis
 - D. Day
 - D. Doss
 - U. Guise
 - K. Harris
 - L. Hollins
 - A. Howard
 - D. Jones
 - L. Jones
 - A. McKay
 - A. Mitchell
 - E. Pate
 - D. Smith
 - Q. Smith
 - J. Spann
 - T. Thompson
 - M. Tillman
 - E. Wilder
 - M. Williams
- MCSO CAD Report
- Excel Printout of Citations 2012-2017
- Complaints File
- MCSO Incident Reports 2012-2017
- MCSO Jail Docket 2013-2016
- MCSO Emails
- MCSO Narcotics Reports
- Citizen Requests for MCSO Enhanced Service

- MCSO Roadblock Locations 1/6/12-8/24/17
- Plaintiffs' Motion for Class Certification and Memorandums
- Defendant's Motion and Filings for Summary Judgement

4. Assignment

I was asked to review the above listed material and conduct a site visit in order to offer my opinion on Madison County Sheriff's Office (MCSO) policies and practices including, among other things, MCSO checkpoint/roadblock protocols; data collected on MCSO traffic citations and arrests, both discretionary and non-discretionary; warrant arrests and warrantless arrests; the difference between initial arrests, post-indictment capias arrests, and post-conviction arrests; specific arrests presented in videos of those arrest incidents.

I employed comparative methodology in determining my opinions relating to the plaintiffs' claims and in measuring the agency's practices and individual officer's actions. This method of comparing the agency's practices and officer's actions of against that, which is generally, accepted practice and training in the law enforcement profession is a common and consistently applied method when evaluating a law enforcement agency's practices and an officer's actions. I have also relied upon my thirty-four plus years of law enforcement, my training, experience and education, as well as my having trained more than forty thousand law enforcement officers and law enforcement executives from every state in the United States as well as other countries utilizing well known and regarded training programs, and my personal knowledge of the training and operational standards in the law enforcement profession. Therefore, all of my opinions are within a reasonable degree of professional certainty.

REVIEW OF MADISON COUNTY SHERIFF'S OFFICE

1. Overview of MCSO Policies and Procedures and Practices

I reviewed the MCSO policy manual and found the policies to be consistent with those found throughout the law enforcement profession, particularly those agencies within the State of Mississippi. As a law enforcement executive who regularly reviews policy manuals and researches current best practices in the law enforcement profession, I approve of the MCSO policies and would consider those policies operationally sound. Also, as a trainer who has trained policy management and risk management for law enforcement agencies around the United States, I consider MCSO's policies to be within the parameters that I have instructed.

2. Plaintiffs' Claims Related to MCSO Policies, Customs and/or practices.

I was also asked to review the Plaintiffs' claims related to MCSO's policies, customs, and practice. The Plaintiffs set forth several contentions regarding allegedly deficient policies

by the MCSO. Below I address each specific contention identified in Plaintiffs' Second Supplemental Responses and Objections to Defendants' First Set of Interrogatories. This is document 234-2 in the record. Each contention (a through i) is listed in below in bold.

a. The Madison County Sheriff's Department's policy, custom, and/or practice of conducting vehicular roadblocks without appropriate procedural safeguards, including (i) roadblocks conducted using unmarked cars, (ii) roadblocks conducted using cars without emergency lighting engaged and/or using flashlights as a primary light source, (iii) roadblocks conducted by plainclothes or undercover officers, including narcotics officers and members of the "NET Team," "Jump Out Detail," and/or "Apartment Detail," (iv) roadblocks conducted in inadequately lit areas, (v) "roving" roadblocks, and (vi) roadblocks at which officers do not stop every car, but instead use their discretion to only stop certain vehicles.

It is unclear what plaintiffs mean by "appropriate procedural safeguards." Appropriateness varies tremendously depending on countless factors, such as available manpower, objective, location, time of day, weather, whether there are exigent circumstances, funding for operation, or concerns about officer safety. This is not an exhaustive list of factors that influence whether law enforcement operations are "appropriate." Further, for a policy and practice to be effective it needs to incorporate the use of officer discretion. The failure to accommodate officer discretion will rob law enforcement actions of valuable insight while undermining effectiveness and, potentially, increasing risk to officers and the public.

The fact that law enforcement agencies use unmarked law enforcement vehicles for safety checkpoints sometimes does not violate any standard. MCSD always uses cars with blue lights on. The policies and practices for law enforcement agencies must allow for officer discretion given that situations where law enforcement actions are taken vary greatly. The tactics deployed by law enforcement professionals often depend on the circumstances and situation on the ground. Law enforcement professionals rarely work in ideal situations. National and local policies to ensure effective enforcement must allow for officers' discretion. The use of unmarked law enforcement vehicles for checkpoints is not uncommon in the law enforcement profession. I do not know of any policies that mandate that plain clothes officers cannot conduct checkpoints so long as they have clothing that make them readily visible to oncoming motorists. Again, how each checkpoint is executed depends on numerous factors and the immediate circumstances.

I conducted a site survey and review along with MCSO personnel of many of the specific locations used for checkpoints, including those in and around Canton Estates. I have personal experience conducting, managing, and reviewing similar operations in similar situations. As a law enforcement executive who regularly reviews such issues, I would approve of the locations visited.

The plaintiffs claim that MCSO deputies should be stopping every vehicle driving through a checkpoint, but instead use deputies' discretion to stop certain vehicles. This assertion is not supported by the evidence.¹ But, regardless I do not see any support from Plaintiffs for this position. Officers must be allowed to use their discretion in carrying out law enforcement activities. Preventing law enforcement officers from using their discretion at checkpoints would cause significant problems and limit the effectiveness of these operations and reduce efficiency. I am aware of no policy that mandates all cars must be stopped in all situations, but understand that the MCSO stops all cars approaching a checkpoint unless traffic is backed up or all officers present at the checkpoint are busy investigating drivers. It is a common practice, and is trained throughout the law enforcement profession, that officers predetermine the frequency of vehicles being selected for stopping at a checkpoint. This may include every vehicle, but more often than not it is a frequency determination of every other vehicle, every third vehicle, etc. Situational issues (e.g., traffic flow, weather) and resources (e.g., manpower) often necessitate that officers not stop every vehicle.

b. The Madison County Sheriff's Department's policy, custom, and/or practice of conducting vehicular roadblocks at which officers require persons other than the driver to produce identification or provide other information, or otherwise search or detain persons without reasonable suspicion or probable cause.

Law enforcement officers throughout the profession are trained on the legality of issues pertaining to traffic stops. As a law enforcement trainer, I have instructed law enforcement officers throughout the country on traffic stop practices. Part of that training is related to the passengers in a vehicle. Training of this type is generated from the United States Supreme Court case of Maryland v. Wilson 519 US 408 (1997), in which the Court advised that, *(i)n summary, danger to an officer from a traffic stop is likely to be greater when there are passengers in addition to the driver in the stopped car. While there is not the same basis for ordering the passengers out of the car as there is for ordering the driver out, the additional intrusion on the passenger is minimal. We therefore hold that an officer making a traffic stop may order passengers to get out of the car pending completion of the stop.*

This ruling allows a law enforcement officer to safely adapt to any given situation on a traffic stop or other vehicle related encounter. For example, with this ruling, officers can order all passengers out of a vehicle suspected of being involved in a violent crime, or as a matter of caution, be able to order passengers out of a vehicle that is equipped with illegally dark tinted windows through which the officer cannot view the vehicle's occupants.

¹ Out of the 20 MCSO officers who were deposed by plaintiffs, only one narcotics officer, Josh Fish, testified that he did not stop every car that passes through a checkpoint. Furthermore, Sheriff Tucker testified that his officers must stop every **vehicle** and check **each** driver's license, unless of course, traffic backs up unduly. Tucker Depo., 129:10-15).

c. The Madison County Sheriff's Department's policy, custom, and/or practice of conducting vehicular roadblocks at which Madison County Sheriff's Department personnel stop, question, detain, and/or search pedestrians in the vicinity of the roadblock without reasonable suspicion or probable cause and/or on the basis of race.

It is my understanding the pedestrian field interviews conducted by MCSO deputies during checkpoints has been in response to investigating trespassing and other complaints from property managers who previously requested MCSO's assistance with such matters or because a pedestrian appears impaired or is interfering with the checkpoint or officer safety. This type of law enforcement activity is common in locations where property owners or property managers request assistance with ensuring trespassers, etc. are not loitering on their properties. I reviewed no material in this case that would cause me, as a law enforcement executive or trainer, to support the argument that MCSO has a policy, custom or practice as an organization of conducting pedestrian stops without reasonable suspicion, or merely conducting a consensual encounter inquiry.

Law enforcement officers are instructed that reasonable suspicion is not precisely defined, however, as pointed out in Attorney Devallis Rutledge's POLICE Magazine June 7, 2011 article:

The term "reasonable suspicion" is not of constitutional derivation but was fashioned by the court to describe a level of suspicion lower than probable cause. The court has struggled to provide meaningful definitions of both terms, and law enforcement officers have likewise struggled to understand and apply the court's vague, general pronouncements. In Ornelas v. U.S., the court acknowledged the problem:

"Articulating precisely what 'reasonable suspicion' and 'probable cause' mean is not possible. They are commonsense, non-technical conceptions that deal with the factual and practical considerations of everyday life on which reasonable and prudent men, not legal technicians, act. As such, the standards are not readily, or even usefully, reduced to a neat set of legal rules." (Ornelas v. U.S.)

Rutledge continued:

"(a)s with the concept of "probable cause," the lower standard of "reasonable suspicion" was not easily defined. "The concept of reasonable suspicion, like probable cause, is not readily or even usefully reduced to a neat set of legal rules," but "the level of suspicion required for a Terry stop is obviously less demanding than that for probable cause." (U.S. v. Sokolow)

The court has said that both the quantity and the quality of information constituting reasonable suspicion may be below the level needed for PC. "Reasonable suspicion is a less demanding standard than probable cause

not only in the sense that reasonable suspicion can be established with information that is different in quantity or content than that required to establish probable cause, but also in the sense that reasonable suspicion can arise from information that is less reliable than that required to show probable cause." (Alabama v. White) (Policemag.com 6/7/11)

d. The Madison County Sheriff's Department's policy, custom, and/or practice of stopping, questioning, detaining, and/or searching pedestrians travelling through majority-Black areas of Madison County without reasonable suspicion or probable cause and/or on the basis of race, including as implemented by narcotics officers and members of the "NET Team," "Jump Out Detail," and/or "Apartment Detail."

I reviewed no material in this case that would cause me, as a law enforcement executive or trainer, to support the argument that MCSO has a policy, custom or practice of conducting pedestrian stops without reasonable suspicion. In the case of preventing trespassing on properties whose management or ownership has requested enhanced law enforcement presence, this is a practice that is commonly found in law enforcement. Agencies generally receive written requests and permission to enforce trespassing and other nuisance investigations on commercial and privately-owned properties.

e. The Madison County Sheriff's Department's policy, custom, and/or practice of conducting vehicular roadblocks for the purpose of checking for outstanding warrants, including but not limited to as described in the Notices produced at (i) MC T. CHASTAIN LAPTOP 17, (ii) MC MAD. COUNTY MAIN SERVER 1, and (iii) MC – SANDRIDGE DESKTOP 23, as well as the Notice annexed to the Complaint and the incident report produced at Bates numbers MC-RFP-Inc. Rep. 010886-010887.

Law enforcement as a profession is generally guided and trained on conducting checkpoints from United States Supreme Court case law in the cases of *Indianapolis v. Edmonds* 532 U.S. 32 (2000) and *Michigan State Dept. of Police v. Sitz* 496 U.S. 444 (1990). From *Edmonds*, the Court guides that:

(a) The rule that a search or seizure is unreasonable under the Fourth Amendment absent individualized suspicion of wrongdoing has limited exceptions. For example, this Court has upheld brief, suspicionless seizures at a fixed checkpoint designed to intercept illegal aliens, United States v. Martinez-Fuerte, 428 U. S. 543, and at a sobriety checkpoint aimed at removing drunk drivers from the road, Michigan Dept. of State Police v. Sitz, 496 U. S. 444. The Court has also suggested that a similar roadblock to verify drivers' licenses and registrations would be permissible to serve a highway safety interest. Delaware v. Prouse, 440 U. S. 648, 663. However, the Court has never approved a checkpoint program whose

primary purpose was to detect evidence of ordinary criminal wrongdoing. Pp. 3-7.

(b) The latter purpose is what principally distinguishes the checkpoints at issue from those the Court has previously approved, which were designed to serve purposes closely related to the problems of policing the border or the necessity of ensuring roadway safety. Petitioners state that the Sitz and Martinez-Fuerte checkpoints had the same ultimate purpose of arresting those suspected of committing crimes. Securing the border and apprehending drunken drivers are law enforcement activities, and authorities employ arrests and criminal prosecutions to pursue these goals. But if this case were to rest at such a high level of generality, there would be little check on the authorities' ability to construct roadblocks for almost any conceivable law enforcement purpose. The checkpoint program is also not justified by the severe and intractable nature of the drug problem. The gravity of the threat alone cannot be dispositive of questions concerning what means law enforcement may employ to pursue a given purpose. Rather, in determining whether individualized suspicion is required, the Court must consider the nature of the interests threatened and their connection to the particular law enforcement practices at issue. Nor can the checkpoints' purpose be rationalized in terms of a highway safety concern similar to that in Sitz, or merely likened to the antismuggling purpose in Martinez-Fuerte. Neither Whren v. United States, 517 U. S. 806, nor Bond v. United States, 529 U. S. 334, precludes an inquiry into the checkpoint program's purposes. And if the program could be justified by its lawful secondary purposes of keeping impaired motorists off the road and verifying licenses and registrations, authorities would be able to establish checkpoints for virtually any purpose so long as they also included a license or sobriety check. That is why the Court must determine the primary purpose of the checkpoint program. This holding does not alter the constitutional status of the checkpoints approved in Sitz and Martinez-Fuerte, or the type of checkpoint suggested in Prouse. It also does not affect the validity of border searches or searches in airports and government buildings, where the need for such measures to ensure public safety can be particularly acute. Nor does it impair police officers' ability to act appropriately upon information that they properly learn during a checkpoint stop justified by a lawful primary purpose. Finally, the purpose inquiry is to be conducted only at the programmatic level and is not an invitation to probe the minds of individual officers acting at the scene.

MCSO's practice has been to conduct safety checkpoints throughout the county, which Dr. Ricchetti's report confirms in paragraph 38. If during the course of the checkpoints they perform a driver's license inquiry or warrants check on an individual during the checkpoint encounter, law enforcement officers are generally, according to the Court, acting appropriately upon information they properly learn during the checkpoint when justified by a lawful primary purpose. As a law enforcement executive who has trained

hundreds of law enforcement executives on risk management and quality practices, I approve of a law enforcement officer inquiring further on the Mississippi Criminal Justice Information System, or any other common source for such information, if that officer is conducting the initial checkpoint encounter for a legitimate law enforcement purpose. The MCSO policy and practice appear for this to be performed in this manner.

When a checkpoint notice specifically stated warrants checks for a purpose of the checkpoint, it was rejected by MCSO command and remanded for corrective action. This is exactly how law enforcement managers and supervisors should oversee line officers. Further, I am aware of no legal requirement to post notices of check points. Most agencies do not, in my experience.

f. The Madison County Sheriff's Department's policy, custom, and/or practice of disproportionately conducting traffic stops in majority-Black areas, conducting pretextual traffic stops on the basis of race, and disproportionately issuing citations to and making arrests of Black individuals during traffic stops.

I address my opinion of this plaintiffs' claim below in Section 4 of my report, below.

g. The Madison County Sheriff's Department's policy, custom, and/or practice of discriminatorily arresting, citing, and/or charging Black individuals at higher rates, and/or with greater severity, than white persons engaged in the same or similar conduct.

I address my opinion of this plaintiffs' claim below in Section 4 of my report, below.

h. The Madison County Sheriff's Department's policy, custom, and/or practice of entering the homes of Black residents of Madison County without warrants or other valid legal justification in the course of serving warrants and/or conducting investigations, and of conducting unreasonable and warrantless searches of such premises in connection therewith.

Law enforcement officers throughout the profession are trained on when an officer may enter a person's residence to serve an arrest warrant, for a felony or misdemeanor. This training is generated from the United States Supreme Court case of *Payton v. New York*, 445 U.S. 573 (1980) from which officers learn that: *(A)n arrest warrant founded on probable cause implicitly carries with it the limited authority to enter a dwelling in which the suspect lives when there is reason to believe the suspect is within.*

Because Mississippi law enforcement officers work within the 5th Circuit Court of Appeals area, they are also guided by 5th Circuit Court of Appeals rulings, such as *United States v. Woods*. In *Woods*, the 5th Circuit Court of Appeals stated the following:

Due to the lack of authority on point, it is difficult to define the Payton "reason to believe" standard, or to compare the quantum of proof the standard requires with the proof that probable cause requires. We think it sufficient to hold that in order for law enforcement officials to enter a residence to execute an arrest warrant for a resident of the premises, the facts and circumstances within the knowledge of the law enforcement agents, when viewed in the totality, must warrant a reasonable belief that the location to be searched is the suspect's dwelling, and that the suspect is within the residence at the time of entry... In evaluating this on the spot determination, as to the second Payton prong, courts must be sensitive to common sense factors indicating a resident's presence.

The MCSO's serving of arrest warrants at an arrestee's residence, and in doing so, entering the arrestee's residence to look for the arrestee is consistent with that which is trained to law enforcement officers throughout the profession.

As is claimed in the Blackmon complaint, MCSO Deputy Scott McDonald and Lt. Jeff Waldrop went to 320 Martin Luther King, Jr. Dr. to serve an arrest warrant on Herbert Anthony Green, who the issuing court specifically indicated, on the warrant, resided at that address. Upon attempting to serve the arrest warrant, the deputies encountered Mr. Blackmon at the entrance door to the residence. Mr. Blackmon resisted the deputies' entering the residence, further causing the deputies to believe Mr. Blackmon was Mr. Green. After showing Mr. Blackmon the warrant and gaining entry into the house the deputies temporarily detained Mr. Blackmon in handcuffs while the deputies determined Mr. Blackmon's identity and secured the residence looking for Mr. Green.

After no more than fifteen to twenty minutes, according to Mr. Blackmon's testimony, the deputies did not locate Mr. Green, determined Mr. Blackmon was not Mr. Green, and released Mr. Blackmon from a temporary detention. Approximately one month later, Mr. Green was arrested at 320 Martin Luther King, Jr. Drive.

Law enforcement officers are instructed by SCOTUS case law, as I previously discussed, on matters concerning entering a residence listed as the address for a person wanted by a court on a warrant. As a law enforcement trainer, giving my students the same scenario as faced by Deputy McDonald and Lt. Waldrop, would direct my students to the same, or similar, conclusion. As a law enforcement executive, I approve of the deputies' actions.

i. The Madison County Sheriff's Department's deliberate indifference to violations of the Fourth and Fourteenth Amendments by its personnel, as demonstrated by (i) the Madison County Sheriff's Department's failure to adequately train, supervise, and/or discipline officers with respect to unconstitutional policing practices and with respect to officers' exercise of discretion in conducting law enforcement activities, (ii) the Madison County Sheriff's Department's failure to adequately investigate or otherwise respond to citizen complaints, (iii) the Madison County Sheriff's Department's failure to maintain data

and/or statistics regarding incidents involving the use of force and the racial composition of persons subject to the Madison County Sheriff's Department's policing activities, and (iv) the Madison County Sheriff's Department's culture of racial discrimination and of explicitly or implicitly condoning, authorizing, and/or acquiescing to racially discriminatory attitudes, statements, and actions by Madison County Sheriff's Department personnel.

The plaintiffs claim that the MCSO is deliberately indifferent towards its citizens exhibited by a lack of training, supervision and complaint investigation. As to MCSO's training, the sworn officers of the MCSO are certified by the Mississippi Board on Law Enforcement Officers Standards and Training (BLEOST). Statutorily, the only training required for sheriff's deputies in the State of Mississippi is basic certification training. Any in-service or advanced training for a deputy past that initial certification is above the statutory requirements.

One training issue specifically mentioned by plaintiffs is the lack of training on discretionary decisions to conduct a traffic stop, write a citation, etc. As a trainer who has taught at several academies in the State of Mississippi and directed the training at two of those academies, I am not aware of any academy in the state or elsewhere that has a course on discretion. An officer's discretionary decisions are based on that officer's perception of what is occurring at that moment of contact with a person on a call or a motorist on a traffic stop. As an executive, I am aware that an officer's discretion to give a warning or issue a citation or make an arrest is the ultimate authority given to law enforcement officers.

MCSO's supervisory practices are similar to those found throughout law enforcement agencies within the State of Mississippi. MCSO supervisors review and approve or remand reports filed by deputies, supervisors respond to scenes in support of deputies and in response to requests for supervisors after uses of force.

Complaints filed with the MCSO are directed by the Sheriff to Chief Deputy Williams. The complaints outlined in the plaintiffs' claims reflect that Chief Williams was aware of the complaints and after making his review, made a decision on the individual complaint's merits. This action is similar to what is found in sheriff's offices throughout the state. MCSO also has a process documenting use of force. Officers must complete a use of force report for any action that involves deployment of taser or discharge of MCSO firearms. Each use of force report is reviewed by supervisors.

As noted above, I reviewed MCSO Policies and Procedures Manual. Section 34(c) provides that "Law enforcement officers will remember that he/she are sworn to protect and serve all citizens of this community equally. Race, color, religion, age, sex, political belief or other personal opinions shall not interfere with the equal administration of justice to all citizens within this jurisdiction."

3. Sobriety/Safety Checkpoint Protocols.

I reviewed MCSO's Policy and Procedures Manual, Part 2, Tab A, Sobriety Checkpoint Guidelines. The MCSO Checkpoint Policy contains directions that are consistent with those recommended by the National Highway Traffic Safety Administration's (NHTSA) "*Saturation Patrols and Sobriety Checkpoints Guide, A How-to Guide for Planning and Publicizing Impaired Driving Enforcement Efforts*" (2002). (See Attachment 1 to my report)

Additionally, model policies offered to agencies throughout the country possess language and directions similar to those found in MCSO's policy. One such model policy, offered by the Legal and Liability Risk Management Institute, and the Kentucky League of Cities, states in the opening: *It shall be the policy of this law enforcement agency to implement a traffic safety checkpoint program. This will be done as part of a comprehensive enforcement program. To ensure standardization of this program a clear and concise set of written guidelines has been developed governing procedures on how checkpoints will be operated within this jurisdiction.* This is similar to that used by MCSO.

Further in the model policy, similar to MCSO's policy, it states:

To implement this policy this agency must:

- a. Satisfy federal, state and local legal requirements.*
- b. Conduct checkpoints with a minimal amount of intrusion or motorist inconvenience.*
- c. Assure the safety of the general public as well as law enforcement Officers/deputies involved.*
- d. Provide for an objective site selection process based on relevant data.*

The Kentucky Model Policy continues with several similarities to MCSO's policy. (See attachment 2 to my report).

My review of the materials in this case indicates to me that the plaintiffs are confusing or comingling the terms traffic stop and checkpoint, or roadblock. There are distinct differences in the two practices and in how the actions take place. A traffic stop is a discretionary act by an officer who has observed or has reasonable suspicion to believe, a motorist has committed a violation of a state statute or local ordinance. Traffic stops are generally singular in nature, meaning an officer in a patrol car signals a driver by means of emergency warning equipment on the police vehicle to pull to the side of the road or other safe location.

Mississippi statutes generally address some of these issues in the following statutes:

Miss. Code Ann. 99-3-3 Time or Place: Arrests for criminal offenses, and to prevent a breach of the peace, or the commission of a crime, may be made at any time or place.

99-3-1 Who May Make Arrests: Arrests for crimes and offenses may be made by the sheriff or his deputy or by any constable or conservator of the peace within his county, or by any marshal or policeman of a city, town or village within the same, or by any United States Marshal or Deputy United States Marshal, or, when in cooperation with local law enforcement officers, by any other federal law enforcement officer who is employed by the United States government, authorized to effect an arrest for a violation of the United States Code, and authorized to carry a firearm in the performance of his duties. Private persons may also make arrests.

99-3-43 Criminal History Background Check to be Conducted: (1) When a state, county or local law enforcement officer stops a person with the intent to effectuate an arrest of the person, if the officer has the capability of doing so, the officer shall, at the time of the stop or as soon as possible thereafter, conduct a criminal history background check on the person being arrested using the National Crime Information Center (NCIC) database. If the stop results in the officer arresting the person, the officer shall make a notation of the person's criminal history at the time of arrest. If the criminal history cannot be obtained at the time of the arrest, it must be accessed and noted at the person's booking. The Federal Bureau of Investigation arrest numbers or system identification numbers of prior arrests or convictions shall be noted and become a part of the person's law enforcement record until the disposal of the matter giving rise to the grounds for arrest. A copy of the person's NCIC driver's license query shall become a part of the person's law enforcement record until the disposal of the matter giving rise to the grounds for arrest.

(2) Subsection (1) of this section shall apply without regard to whether the person:

- (a) Is arrested for a misdemeanor or felony offense;
- (b) Is issued a citation in lieu of continued custody; or
- (c) Is arrested without a warrant.

Conducting a safety checkpoint or roadblock generally involves an officer, or officers, in a generally fixed location stopping motorists as the motorists approach the checkpoint location. Generally, officers utilize a guideline for which vehicles will be stopped and which will pass unchecked. Vehicles and drivers who require further investigation, such as drivers who approach the checkpoint and do not possess a driver's license, will be moved to a pull off location out of the way of traffic.

While a traffic stop will take place depending on the location of the traffic violation, checkpoints are generally set up in locations where the law enforcement agency has determined it is needed in response to varying factors. There are numerous factors that go into this decision, as mentioned above. These factors can include citizen complaints about traffic violators, officer safety, traffic flow, weather, personnel available to conduct,

DUI grant functions (especially those functions required by grant funding agencies for specific targeted holidays and dates), near bars and nightclubs, late-night restaurants, and areas of special concern, such as places where there is a potential for pedestrians to be in harm's way. For example, larger churches in communities where the church is located on a road where traffic is an issue, or a school zone where there are children crossing the streets and being dropped off near or at the school. Checkpoints can be located anywhere, but often are not physically in the middle of intersections where traffic would approach from 360 degrees. Checkpoints commonly are located on a road approaching an intersection near somewhere that allows room for officers to operate and pull people to the side. Given the location, there is not always room to pull completely off. Determining checkpoint locations is often the role of a shift, or unit, supervisor. For example, an agency with a specific traffic unit will generally authorize the traffic unit supervisor to make such determinations. It is my understanding that Deputy Sandridge and Deputy Thompson have primary roles during the relevant time period. Further, the location of a MCSO checkpoint is approved by a supervisor.

4. Arrests

In Dr. Rahul Guha's analysis declaration, Appendix B, the percentages of arrests for black arrestees vs. non-black arrestees and the county's black population percentage there are several statutory offenses listed. Dr. Guha's analysis indicates a high number of traffic offense arrests and citations for black motorists in Madison County. For example, Dr. Guha's data shows that 88% of citations for not wearing a seatbelt were issued to black drivers and 94% for citations for not having children properly restrained in a moving vehicle.

This would appear, along with other numbers on Dr. Guha's charts, to superficially demonstrate bias toward black drivers. However, his data does not provide any context or benchmark that would show similarly-situated Caucasian drivers. As a law enforcement executive who regularly reviews such data for law enforcement management and resource allocation, I or any other law enforcement executive would also read with interest the data on what is commonly referred to as non-discretionary arrests. A discretionary arrest, or citation, is an event that would more than likely start with an officer observing a violation of the law. That officer then has the discretion to stop the person the officer sees breaking the law. More often than not, this involves a traffic violation, or as an example, a person walking down the street intoxicated. The officer then has the discretion to issue a citation, make an arrest, or give a warning or some other non-custodial remedy. What matters to the review is how officers are exercising discretion, not all arrests or citations.

A non-discretionary arrest involves a criminal act that generally eliminates an officer's discretion to enforce the law and make an arrest. Most non-discretionary arrests involve a crime victim, or victims. For example, burglary, assault, aggravated assault, armed robbery and murder would be crimes affecting a victim. Dr. Guha's analysis reflects non-discretionary arrests, or victim-based crimes, as equally high. For example, arrest rates for black arrestees in Madison County are shown in Dr. Guha's analysis as arrests for

burglary 80%, simple assault 81%, aggravated assault 84%, shoplifting 83%, and armed robbery 95%.

I also have some concerns about Dr. Guha's lack of understanding with law enforcement data. His tables and calculations do not attempt to separate out the most important information, assuming such information is even available from the data he used, which I doubt. Each law enforcement agency and jurisdiction have their own unique processes for record keeping. His calculations are based on his assumption that the data is collected in manner that accommodates this type of tabulation and calculation. However, his type of over simplified calculations recognize that MCSO and local courts may not keep their records in a manner that accommodate these types of calculations and he would need to undertake local discussion with personnel to understand what type of sorting and arranging needs to be done to provide meaningful information for this type of review, assuming such information is even available.

For example, Exhibit 9 of Dr. Guha's Declaration claims he identified 102 unique traffic stops initiated for drivers or vehicle occupants not wearing safety restraints, which resulted in arrests. In this exhibit, Dr. Guha suggests he identified 102 arrests for seat belt violations. What is missing from Dr. Guha's analysis is the arrestees in these 95 incidents generally were arrested for charges other than a seatbelt or restraint violation. My review of the incident reports cited in Exhibit 9 revealed that a majority of those persons arrested were arrested for other offenses, not just seatbelt or restraint related violations. As is often the case in law enforcement incidents, the reason for the arrest has little or nothing to do with the initial reason for the encounter. In the Exhibit 9 incident reports, I read numerous drug related arrests, drivers arrested for not possessing a driver's license, outstanding warrants and people wanted by the Mississippi Department of Corrections (MDOC).

To a law enforcement executive these numbers reveal that the volume of discretionary, often officer-initiated, arrests are on par with those non-discretionary arrests made in response to victims seeking law enforcement to investigate and arrest their attacker or thief. Also, as an executive, I found Dr. Guha's statistical analysis to not include the fact that law enforcement executives must take into account the context of the data collected. Dr. Guha testified at deposition (106:5-107:23) that he finds context not feasible or sensible when looking at data collection. For a law enforcement executive, it is very important. For example, officers working in metropolitan statistical areas like Madison County, or the MS Gulf Coast, find themselves interacting, responding to calls and making investigative stops on persons from multiple jurisdictions. MCSO deputies do not just practice law enforcement on Madison County residents and it is not just Madison County residents committing infractions. Having that data separated would let a law enforcement executive view a larger picture of how enforcement is affecting citizens of his or her jurisdiction.

Importantly, every traffic stop, search, arrest, and citation is unique and must be evaluated on the individual facts. Lumping all of this data into vague concepts does not provide

sufficient information for a law enforcement professional to draw any reliable conclusion. This information is largely meaningless, even more so since neither Dr. Guha nor Dr. Ricchetti do not provide any analysis.

Additionally, the MCSO performs many services for citizens and property managers within Madison County who have specifically requested the MCSO to enhance law enforcement presence in their respective areas. A majority of these areas are majority black population. This would mean to me, as a law enforcement executive, that officers tasked with assisting the citizens and property managers who have requested enhanced law enforcement presence that officers would more often make contact with traffic violators and others who are black citizens.

Another factor to consider that would provide context for a law enforcement executive when determining how to allocate resources, such as a Neighborhood Enforcement Team, or enhanced patrol presence, is reviewing the population areas containing the higher crime rates, not arrests necessarily, but criminal activity reported to law enforcement.

Targets Moving Through Justice System

My review of the data on MCSO arrests included the arrests made on warrants and writs of capias. Generally, arrest data can become skewed due to the movement through the criminal justice system. For example, a person is arrested for a violation and booked into jail, then bonded out with an assigned court date. That person's arrest will show as an arrest. Then, if the person does not appear in court as ordered, the bench will issue a warrant for that person's arrest for failing to appear. Then, that person is arrested on the warrant, and will still have the original charge outstanding. If the person again fails to appear or fails to follow the sentence handed down by the court, another warrant will be issued by the bench. Such warrant arrests are considered non-discretionary for law enforcement officers and are not generated by a law enforcement officer, but by a judge or magistrate. Dr. Guha lumps these all together. MCSO are not exercising discretion when the grand jury indicts someone, or when someone pleads guilty to a crime or is otherwise booked into the jail post-conviction.

Additionally, if the person was initially arrested for a felony crime, their first arrest would be shown as an arrest, followed by the grand jury handing down a true-bill of the case against that person. This is an indictment, which creates another warrant, or capias. That person is again arrested and rebooked on the same charge. This can cause data to be skewed without separating the individual events that occur involving the same person. Another factor not addressed is the differentiation between stops and actual arrests. I have not read any data that indicates the number of stops, traffic or otherwise and how that correlates to citations and/or arrests. Nor have I reviewed any data suggesting which citation recipients or arrestees were not citizens of Madison County. This would be important to know since there are two interstates located in Madison County and it shares a major commercial corridor with neighboring Hinds County. The Census included Madison County in the five-county Jackson Metropolitan Statistical Area showing that even the Census Bureau does not view Madison County's population isolated as Dr. Guha's calculations suggest. Further, this says nothing about how those represented by

counsel and unrepresented people are processed through the system. It would not be uncommon for those represented by counsel to be “arrested” fewer times as they move through the system. This is something that Dr. Guha’s calculations do not account for. From his deposition he does not even seem to recognize this important factor, which would be important to know.

It is my opinion the percentage of discretionary citations and arrests reflected in the data listed in discovery directly correlate to the percentage of non-discretionary arrests and would indicate to me, or any other law enforcement executive, where law enforcement resources should be allocated.

Such law enforcement resources include specialized law enforcement units. The MCSO has a unit entitled Neighborhood Enhancement Team (NET). Many agencies employ the NET strategy in response to high crime neighborhoods. NET activities are often decided by a number of factors, including neighborhood requests, business requests, crime statistics, majority of calls for service (especially 911 emergency calls) etc. If the MCSO has a large amount of crime occurring in a particular part of Madison County, a law enforcement executive would direct NET resources to those areas. NET, being a versatile unit, can be assigned to assist other department units including patrol when conducting safety checkpoints. It is a common practice in the law enforcement profession for specialized units to participate with or conduct such duties, especially in well-known high-crime areas.

5. Review of Specific Incidents

a. MCSO CAD 2015-4075

On March 19, 2015, Deputy Bradley Sullivan conducted a traffic stop after observing the driver of a vehicle operating the vehicle without wearing a seatbelt. During the deputy’s traffic investigation, the driver, Jaylan Milner refused to cooperate with Deputy Sullivan’s requests for Jaylan Milner to roll down the driver’s door window. The passenger, Joshua Milner informed Deputy Sullivan that the window was cracked open and that was good enough. At about this time, a Madison County Constable arrived to assist Deputy Sullivan with the traffic stop.

Deputy Sullivan requested Joshua’s identification, to which, Joshua refused. Deputy Sullivan approached the passenger side of the vehicle and requested that Joshua exit the vehicle. Joshua verbally refused. Deputy Sullivan then opened the passenger door and repeatedly requested Joshua to exit the vehicle. After several attempts, Joshua exited the vehicle.

Deputy Sullivan then requested Joshua to submit to a pat-down, which Joshua verbally and physically resisted. In response to Joshua’s physical resistance, Deputy Sullivan, assisted by Constable Weisenberger, attempted to control Joshua by placing Joshua against the vehicle. At about this point, Jaylan exited the driver’s side and verbally threatened the officers. Constable Weisenberger ultimately controlled Jaylan, while

Deputy Sullivan finally gained control of Joshua. Both Jaylan Milner and Joshua Milner were arrested.

First, the reason for Deputy Sullivan conducting a traffic stop on the Milner vehicle was consistent with enforcement of Mississippi Statute 63-2-1, Safety Belt Usage, section 1, which states, *(w)hen a passenger motor vehicle is operated in forward motion on a public road, street or highway within this state, every operator and every passenger shall wear a properly fastened safety seat belt system, required to be installed in the vehicle when manufactured pursuant to Federal Motor Vehicle Safety Standard 208.*

Second, Deputy Sullivan's actions of leaving the driver and addressing the passenger for identification was consistent with what I have trained officers to do in similar situations. Requesting the passenger, in this case, Joshua Milner, to exit the vehicle is consistent with what law enforcement officers have been trained for the past twenty years based on the United States Supreme Court case of Maryland v. Wilson 519 US 408 (1997), in which the Court advised that, *(i)n summary, danger to an officer from a traffic stop is likely to be greater when there are passengers in addition to the driver in the stopped car. While there is not the same basis for ordering the passengers out of the car as there is for ordering the driver out, the additional intrusion on the passenger is minimal. We therefore hold that an officer making a traffic stop may order passengers to get out of the car pending completion of the stop.*

Deputy Sullivan had requested Joshua Milner to produce identification, to which Joshua refused. Deputy Sullivan repeatedly requested Joshua to exit the vehicle, which Joshua refused several times until finally exiting the vehicle, and when Deputy Sullivan requested Joshua to submit to a pat-down, Joshua physically resisted. Joshua Milner's actions at this point could cause an officer to believe that Joshua had violated Mississippi Statute 97-35-7, Disorderly Conduct; failure to comply with requests or commands of law enforcement officers.

As a trainer I would direct my students to perform in a manner similar to that displayed by Deputy Sullivan during this stop. As a law enforcement executive, who regularly reviews such actions, I would approve of Deputy Sullivan's actions when interacting with Jaylan and Joshua Milner.

b. MCSO CAD 2016-2097, 2016-2098

On February 9, 2016 at around 2 a.m., MCSO Deputy Rylon Thompson observed an oncoming vehicle with high beam headlights on. After signaling the driver to dim the headlights, but getting no response, Deputy Thompson conducted a traffic stop. Deputy Thompson made contact with the driver, Rolanda Johnson and issued Ms. Johnson a citation for failing to dim the headlights. Deputy Thompson's actions were consistent with other Mississippi law enforcement officers when enforcing Mississippi Statute 63-3-37 Multiple-beam road-lighting equipment; control by the operator. The statute states: *Whenever a motor vehicle is being operated on a highway or shoulder adjacent thereto during the times specified by law, the driver shall use a distribution of light, or composite*

beam, directed high enough and of sufficient intensity to reveal persons and vehicles at a safe distance in advance of the vehicle, subject to the requirement that whenever the driver of a vehicle approaches an oncoming vehicle within five hundred feet, such driver shall use a distribution of light or composite beam so aimed that the glaring rays are not projected into the eyes of the oncoming driver.

After issuing Ms. Johnson a citation, Deputy Thompson advised Ms. Johnson that Deputy Thompson smelled the aroma of marijuana coming from the vehicle. When Deputy Thompson inquired further, Ms. Johnson's answers and actions caused Deputy Thompson to request Ms. Johnson's consent to search the vehicle. Ms. Johnson consented. Deputy Thompson discovered a small amount of marijuana in the vehicle and charged Ms. Johnson with only possession of paraphernalia.

During the stop, MCSO Sergeant Slade Moore assisted Deputy Thompson. At some point during the stop, a male identified as Joseph Stuckey approached the stop location. After Sergeant Moore requested Mr. Stuckey to get out of the roadway and move to a safer place to observe the stop, Mr. Stuckey refused. Sergeant Moore arrested Mr. Stuckey for Mississippi Statute 97-35-7, Disorderly Conduct; failure to comply with requests or commands of law enforcement officers.

Deputy Thompson's and Sergeant Moore's actions were consistent with what I have trained officers to perform in similar situations and as a law enforcement executive reviewing such actions, I would approve of their performance.

c. MCSO CAD 2016-18449, 18450

On November 27, 2016 at around 1:20 a.m., MCSO Sergeant Slade Moore, along with several other MCSO deputies, were providing traffic safety on Interstate 55 at the scene of a motor vehicle accident. During the deputies' time at the scene, several family members associated with one of the accident vehicles arrived. Many of the family members were observed walking around both northbound and southbound lanes of Interstate 55, in the dark. For everyone's safety, Sergeant Moore requested everyone not involved in the accident to leave away from the scene, and for everyone involved in the accident to remain with one of the vehicles until the investigating state troopers could finish communicating with them.

Destiny Jones, a female involved in the accident, became disorderly and refused to comply with Sergeant Moore's requests. Additionally, Ms. Jones acted in a disorderly manner when an investigating state trooper requested Ms. Jones to exit the vehicle so the trooper could gather information.

Sergeant Moore arrested Ms. Jones for disorderly conduct. When attempting to physically arrest Ms. Jones, Ms. Jones pulled away from Sergeant Moore's attempts at control. At the same time, John Leach, Ms. Jones' husband physically interfered with Sergeant Moore's arrest of Ms. Jones. Ultimately, MCSO Deputy James Hall was able

to gain control of, and arrest, Mr. Leach and Sergeant Moore was able to control and arrest Ms. Jones.

The safety of persons at a traffic scene is of paramount importance to law enforcement officers. This particular accident scene proves the point if a person isn't going to avoid striking a marked state trooper vehicle, with flashing blue lights, the safety of a person walking around the interstate is definitely in jeopardy. As can be seen on the relative videos of this incident (Disks 200-203) the MCSO deputies on scene were wearing highly reflective/contrast vests as approved by the National Highway Traffic Safety Administration (NHTSA). Requesting persons to clear the area or remain in a vehicle within a contained area is consistent with those practices I as a law enforcement executive require of my officers and those officers who I have trained.

Sergeant Moore attempted several times to gain compliance from Ms. Jones. Each time, Ms. Jones resisted. Ms. Jones' actions were consistent with what I, or other officers in similar circumstances, would consider disorderly under Mississippi Statute 97-35-7, Disorderly Conduct; failure to comply with requests or commands of law enforcement officers.

Additionally, interfering with a law enforcement officer performing his or her duties, as was done by Mr. Leach, an officer can charge an arrestee under Mississippi Statute 97-9-103 Hindering prosecution or apprehension, section (d): For the purposes of this article, a person "renders criminal assistance" to another if he knowingly: section (d) Prevents or obstructs, by means of force, deception or intimidation, anyone from performing an act that might aid in the discovery, apprehension, prosecution or conviction of the other person.

Deputy Hall's described actions when arresting Mr. Leach were consistent with what I have instructed other officers to do in similar situations and as a law enforcement executive, I would approve of the deputy's actions.

d. MCSO CAD 2016-17715

On November 11, 2016 at around 1:20 p.m., MCSO Deputy Jason Barnes was conducting a roadblock when Deputy Barnes made contact with a dump truck driver, Maurice Edwards. Mr. Edwards was wanted on an outstanding Justice Court warrant for a seatbelt violation. Deputy Barnes decided to allow Mr. Edwards, who had a valid driver's license, to drive the tow truck to the MCSO and turn himself in on the warrant.

This was a warrant-based arrest, and as discussed previously in my report, warrant arrests are considered non-discretionary arrests. A warrant, specifically a failure to appear, or failure-to-pay warrant, is originated from the bench as a result of a failure on the arrestee's part to comply with the court's orders. These arrests are charges based on the arrestee already having been ticketed or arrested previously.

e. MCSO CAD 16-19279

On December 11, 2016 MCSO Deputy Tyler Burnell, along with other deputies, was located at Hwy 16 and Avondale Rd conducting a safety checkpoint. Deputy Burnell saw a vehicle driver conduct an illegal U-turn and drive away from the check point location. MCSO Deputy McFarland attempted a traffic stop on the vehicle, but the driver, later identified as Kimber Luckett, chose to flee from the deputy. Deputy Burnell then joined Deputy McFarland with attempting to stop the fleeing driver.

After a lengthy pursuit, Ms. Luckett stopped the vehicle as it approached a Leake County Sheriff's vehicle and fled on foot. Ms. Luckett fell to the ground, at which time Deputy Burnell was able to reach Ms. Luckett. Ms. Luckett continued to resist Deputy Burnell's attempts at control, causing Deputy Burnell to deploy a TASER on Ms. Luckett. Ms. Luckett continued to resist Deputy Burnell's attempts at control, requiring Deputy Burnell to cycle the TASER a second and a third time. After the third TASER cycle, Ms. Luckett complied with Deputy Burnell's control attempts and was taken into custody without further action. Deputy Burnell charged Ms. Luckett with several traffic violations and felony fleeing and eluding in a motor vehicle.

Deputy Burnell's description of Ms. Luckett's initial traffic violation is consistent with Mississippi Statute 65-5-19, which states: *It is unlawful for any person (1) to drive a vehicle over, upon, or across any curb, central dividing section, or other separation or dividing line on controlled-access facilities; (2) to make a left turn or a semicircular or U-turn except through an opening provided for that purpose in the dividing curb section, separation, or line; (3) to drive any vehicle except in the proper lane provided for the purpose and in the proper direction and to the right of the central dividing curb, separation section, or line; (4) to drive any vehicle into the controlled-access facility from a local service road except through an opening provided for that purpose in the dividing curb or dividing section or dividing line which separates such service road from the controlled-access facility proper. Any person who violates any of the provisions of this section is guilty of a misdemeanor and, upon arrest and conviction therefor, shall be punished by a fine of not less than five dollars (\$ 5.00) nor more than one hundred dollars (\$ 100.00), or by imprisonment in the city or county jail for not less than five days nor more than ninety days, or by both such fine and imprisonment.*

Ms. Luckett's continued fleeing from the deputies as seen on the MVR is consistent with what a law enforcement officer would charge a driver under Mississippi Statute 97-9-72 (2), which states: *Any person who is guilty of violating subsection (1) of this section by operating a motor vehicle in such a manner as to indicate a reckless or willful disregard for the safety of persons or property, or who so operates a motor vehicle in a manner manifesting extreme indifference to the value of human life, shall be guilty of a felony, and upon conviction thereof, shall be punished by a fine not to exceed Five Thousand Dollars (\$ 5,000.00), or by commitment to the custody of the Mississippi Department of Corrections for not more than five (5) years, or both.*

Additionally, given the details of Deputy Burnell's report, Ms. Luckett's actions of fleeing on foot and physically resisting Deputy Burnell's control attempts would be consistent with

Mississippi Statue 97-9-73, which states: *It shall be unlawful for any person to obstruct or resist by force, or violence, or threats, or in any other manner, his lawful arrest or the lawful arrest of another person by any state, local or federal law enforcement officer, and any person or persons so doing shall be guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of not more than Five Hundred Dollars (\$ 500.00), or by imprisonment in the county jail not more than six (6) months, or both.*

Deputy Burnell's use of a TASER to control Ms. Luckett is consistent with what I have instructed law enforcement officers throughout the country to perform when confronting an arrestee who, after leading law enforcement on a pursuit, and then fleeing on foot, and then physically continue to resist an officer's arrest attempts. As a law enforcement executive who regularly reviews such incidents, I would approve of Deputy Burnell's use of the TASER to gain compliance from Ms. Luckett.

f. MCSO CAD 15-8117

On May 23, 2015 at around 3:50 p.m., MCSO Deputy Christopher Abels saw the driver of a white Ford Explorer fail to stop when faced with a stop sign. Using blue lights, Deputy Abels signaled the driver to pull over. The driver pulled into a gas station/grocery store, at which time Deputy Abels saw the driver, later identified as John Dillard, exit the Explorer and begin to walk away. Deputy Abels verbally directed Mr. Dillard to return to Deputy Abels. According to Deputy Abels' Mr. Dillard had an odor of intoxicating beverages emanating from Mr. Dillard. Deputy Abels saw an opened bottle of beer inside Mr. Dillard's vehicle passenger area. Deputy Abels learned from Mr. Dillard that Mr. Dillard did not have a driver's license in his possession. Deputy Abels offered Mr. Dillard an opportunity to take a portable breath test, which Mr. Dillard refused. Mr. Dillard also advised Deputy Abels that Mr. Dillard would not pass a breath test.

Deputy Abels then attempted to arrest Mr. Dillard, but instead of submitting to an arrest, Mr. Dillard chose to physically resist. After several control attempts, Mr. Dillard continued to physically resist arrest. Deputy Abels deployed a TASER to Mr. Dillard, at which time Mr. Dillard went to the ground and complied with the remaining arrest procedure. Deputy Abels used no further force on Mr. Dillard.

Deputy Abels then request emergency medical services (EMTs) to treat Mr. Dillard's abrasions. Deputy Abels also notified MCSO Sergeant William Weisenberger, who then arrived on the scene. EMTs transported Mr. Dillard to a medical facility for treatment. After Mr. Dillard's medical release, Deputy Abels transported Mr. Dillard to MCSO.

The charges for which Deputy Abels charged Mr. Dillard are consistent with 63-11-30, Operating a vehicle while under influence of alcohol, which states: *It is unlawful for a person to drive or otherwise operate a vehicle within this state if the person:*

- (a) *Is under the influence of intoxicating liquor;*

Mississippi Statue 97-9-73 Resisting arrest, which states: *It shall be unlawful for any person to obstruct or resist by force, or violence, or threats, or in any other manner, his*

lawful arrest or the lawful arrest of another person by any state, local or federal law enforcement officer, and any person or persons so doing shall be guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of not more than Five Hundred Dollars (\$ 500.00), or by imprisonment in the county jail not more than six (6) months, or both.

Deputy Abels use of a TASER was consistent with what I have trained law enforcement officers throughout the country to do when attempting to control an arrestee who has continuously refused and physically resisted an officer's arrest attempts. As a law enforcement executive who regularly reviews such incidents, I would approve of Deputy Abels' use of a TASER. Additionally, it is my opinion that Deputy Abels acted in a manner consistent with good police practices when Deputy Abels acquired immediate medical attention for Mr. Dillard.

g. MCSO CAD 15-19058

On November 28, 2015, MCSO Deputy Joel Evans was conducting a safety checkpoint on Canton Parkway when a driver operating a Grey Chevrolet SUV approached the checkpoint. Deputy Evans reported that while conversing with the driver, Deedre Day, Deputy Evans smelled marijuana odor coming from Mr. Day's car. After Deputy Evans requested Mr. Day to pull the vehicle to a specific location, Mr. Day chose to drive about fifty yards further the requested. When Deputy Evans regained contact with Mr. Day, Deputy Evans observed three of the car's windows were now down and the odor of cologne was now present. Deputy Evans saw a bottle of cologne on the passenger seat, where previously it had not been.

Mr. Day agreed to a field sobriety test, which Deputy Tyler Burnell conducted. After the field sobriety test, Deputy Evans searched Mr. Day's vehicle, finding marijuana and a .40 semiautomatic handgun. Further search revealed a pill bottle containing marijuana and a loaded semiautomatic pistol magazine.

Deputy Evans charged Mr. Day with possession of marijuana, in possession of a firearm. Deputy Evans charging Mr. Day with an enhanced charge is consistent with Mississippi Statute 41-29-139(c), which states:

It is unlawful for any person knowingly or intentionally to possess any controlled substance unless the substance was obtained directly from, or pursuant to, a valid prescription or order of a practitioner while acting in the course of his professional practice, or except as otherwise authorized by this article.

And, with Mississippi Statute 41-29-152(1), which states: *Any person who violates Section 41-29-313 or who violates Section 41-29-139 with reference to a controlled substance listed in Schedule I, II, III, IV or V as set out in Sections 41-29-113 through 41-29-121, Mississippi Code of 1972, inclusive, and has in his possession any firearm, either at the time of the commission of the offense or at the time any arrest is made, may be punished by a fine up to twice that authorized by Section 41-29-139 or 41-29-313, or by a term of*

imprisonment or confinement up to twice that authorized by Section 41-29-139 or 41-29-313, or both.

Deputy Evans was conducting a safety checkpoint within MCSO jurisdiction. Upon making contact with Mr. Day, Deputy Evans acted in a manner consistent with what I have trained law enforcement officers throughout the country to perform. When a person is operating a motor vehicle and the officer smells an odor consistent with marijuana, or other illegal substance, the officer should investigate further, as it would be against good law enforcement practices to let a person who may be under the influence to continue operating a motor vehicle.

After conducting what was reported as a field sobriety test consistent with those with which I am familiar, along with Deputy Evans' personal observation of marijuana odor, Deputy Evans' observation of Mr. Day's failure to follow directions on the stop, Mr. Day having rolled down the windows of the SUV, and Deputy Evans' observation that Mr. Day had sprayed cologne, which would mask the smell of marijuana, Deputy Evans conducted a probable cause search of Mr. Day's SUV. The search uncovered the previously described items.

Law enforcement officers throughout the profession are instructed through the United States Supreme Court's ruling in Carroll v. United States 267 U.S. 132 (1925) and subsequent rulings that referenced Carroll, that applies to searches of vehicles that are supported by probable cause to believe that the vehicle contains contraband. In this class of cases, a search is not unreasonable if based on objective facts that would justify the issuance of a warrant, even though a warrant has not actually been obtained.

As a law enforcement trainer who has instructed officers throughout the country on matters concerning an officer's development of the totality of circumstances that lead to possessing probable cause for an arrest or a search, and as a law enforcement executive who regularly reviews such incidents, I would approve of Deputy Evans' actions.

h. MCSO CAD 16-4699

On March 25, 2016 at around 2:30 a.m., MCSO Deputy Rylon Thompson was working a safety checkpoint on Countyline Rd., within MCSO's jurisdiction. Deputy Thompson contacted the driver of a tan Chevrolet HLT. While speaking with the vehicle's driver, Deputy Thompson reported to have smelled the odor of burned marijuana coming from inside the car. Deputy Thompson advised the driver that Deputy Thompson would be conducting a probable cause search (see my previous opinion above on law enforcement officers' training on probable cause vehicle searches).

Upon conducting the vehicle search, Deputy Thompson discovered a glass pipe containing marijuana residue in a purse found on the rear seat. A passenger, Alyasia Jordan, advised she was the owner of the marijuana. Deputy Thompson arrested Ms. Jordan for possession of marijuana.

As a law enforcement trainer who has instructed officers throughout the country on matters concerning an officer's development of the totality of circumstances that lead to possessing probable cause for an arrest or a search, and as a law enforcement executive who regularly reviews such incidents, I would approve of Deputy Thompson's actions.

As for Deputy Thompson continuing the probable cause search of the vehicle to include Ms. Jordan's purse, throughout the law enforcement profession, officers are trained on the probable cause search of a person's purse when a passenger in a vehicle that was lawfully stopped. That training stems mainly from the United States Supreme Court case, Wyoming v. Houghton 526 U.S. 295 (1999), where the Court instructs officers that police officers with probable cause to search a car may inspect passengers' belongings found in the car that are capable of concealing the object of the search.

I base my opinions on information provided to me to date, on references in my report and on current, and period current, generally accepted training and operational procedures in the law enforcement profession, Mississippi statutes and my experience and training as a law enforcement officer, executive, and trainer. I currently receive \$150 per hour for my time. My CV and fee schedule are attached to this report. If I am provided new information concerning this case, including trial testimony, I may provide further opinions. I will also serve to rebut any opinions offered by plaintiffs' experts. I reserve the right to attend the trial of this matter and provide further opinions dependent upon trial testimony.

Professionally,

A handwritten signature in black ink, appearing to read 'Mark S. Dunston', with a stylized flourish at the end.

Mark S. Dunston

MARK S. DUNSTON
PO Box 1706 Ocean Springs, MS 39566-1706 228 348-1189

Current Position: Chief of Police, Ocean Springs (MS) PD
Ocean Springs, MS USA

Professional Associations and Positions:

International Law Enforcement Educators and Trainers Association (ILEETA)

- Member 2006 – 2010

American Society of Law Enforcement Trainers (ASLET)

- Member 1988 - 2004
- State Director (MS) 1990 - 1995
- Elected to Board of Directors 1995 - 1999

National Law Enforcement Credentialing Board (NLECB)

- Job Task Analysis Committee 1995 - 1996
- Test Development Committee 1996

Police Marksman Magazine National Advisory Board

- Member of Board 1991 - 2000

International Association for Identification (IAI)

- Certified Senior Crime Scene Analyst 1992

FBI National Academy Associates 1997 to present

MS Association of Chiefs of Police 2007 to present

- Chair, Training Committee 2016 to present

ASIS International 2010 to present

American Board for Certification in Homeland Security (ABCHS) 2012 to present

- CHS-I Certification

Texas Commission on Law Enforcement (TCOLE)

- Advisory Board Member 2015 to present

Education and Leadership Awards:

Graduate, 20th Session

Police Executive Research Forum/ Harvard University Kennedy School of Government
Senior Management Institute, Boston, MA 1997

Graduate, 191st Session

FBI National Academy, Quantico, VA 1997

Leadership in Criminal Justice Training Award, *PPCT International Trainer Conference*, 1998

Training and Instructor Certifications:

State of Mississippi, Peace Officer Standards and Training (POST) Professional Instructor Certification History:

- Use of Force/Liability
- Firearms
- Arrest Techniques
- Subject Control/Defensive Tactics
- Impact Weapons
- Criminal Investigations
- Law Enforcement Driving
- Police Officers' Rights

PPCT Management Systems Instructor Trainer History

- Use of Force/Subject Control Instructor Trainer
- Impact Weapons Instructor Trainer
- Pressure Point Control Instructor Trainer
- Spontaneous Knife Defense Instructor Trainer
- Violent Patient Management Instructor Trainer
- Close Quarter Combat Instructor

Firearms and Lethal Force Instructor Training History

- Federal L.E. Training Center Firearms Instructor, SAPP, FIMWITP
- NRA Firearms Instructor
- Glock Firearms Instructor, Armorer
- NMLETC Firearms Course Developer
- Talon International Applegate Shooting Method Instructor

Other Instructor Training History

- TASER Instructor
- Police Defensive and Pursuit Driving Instructor (FLETC)
- Counter Terrorism/Assault Driving Instructor (FLETC)
- Instructor Development (FLETC Behavioral Sciences)
- OC Agent Use of Force Instructor/Trainer
- ASP Instructor, Instructor Trainer 1990-1992
- Monadnock PR-24 Instructor 1986-1989

Professional Development Training History

- ASLET Conference 1998-2006
- ILEETA Conference 2007
- PPCT Management Systems International Conference 1993-2002
- MS Assoc. of Chiefs of Police Training Conference 1996, 2007-2017
- FBINAA Training Conference (MS) 2007-2017
- Chicago Kent Law School Section 1983 Litigation Conference 2008
- TASER Use of Force, Risk Management and Legal Strategies 2011, 2013
- FBINAA International Conf. 2010

Publications:

Books and Monographs

- Street Signs © 1992, Performance Dimensions Publishing, *An identification guide on gangs and criminal symbols.*
- Total Survival © 1993, Performance Dimensions Publishing, *Author of Chapter 15, Reading the Streets*
- Featured author in The Best of The Police Marksman, Vol. II, © 2002

- Content editor, Sharpening the Warrior's Edge, Siddle , © 1998
- Contributing Editor, On Combat, Grossman, © 2004
- Critical Issues in Use of Force, What Law Enforcement Executives Should Know © 2011 ,
Author of Chapter 3 Use of Force Policy
IL Law Enforcement Executive Forum and Western IL University
- Guidelines for Investigating Officer-Involved Shootings, Arrest-Related Deaths, and Deaths in Custody © 2018, *Co-Author, Chapter 6, Officer-Involved Incident Investigation Guidelines*

Video and Televised Training

Individual Video

- "Gangs and Identification", LE Net, © 1991
- "Street Signs", Performance Dimensions Publishing, © 1992 *Accompanying video to book.*
- "Officer Survival Tips", Performance Dimensions Publishing, © 1994
- "Leadership Issues", Performance Dimensions Publishing © 2000

Law Enforcement Television Network (LETN)

- Several training programs for LETN 1994 - 2009
- Use of Force content expert for network 1996 – 2003
- Co-Hosted "Command Center" Management Series 1997- 1999
- Regular panelist, Executive Forum 2000- 2001

Professional Security Television Network (PSTN)

- Gangs and Their Signs, 1994
- Use of Force, 1995
- Security and Security Management Issues, 1994-2000
- Officer Survival Searches and Frisks, 2009
- Officer Survival Handcuffing Tactics, 2009

PULSE Emergency Medicine TV Network

- Controlling Assaultive Patients 1999

POLICEONE.COM Video

- Active Shooter Response Preparation and Tactics 2008
- Leadership Paradox 2008
- Use of Force/4th Amendment Issues 2008

Mass Media Appearances (Content Expert)

- CBS News Louisville, KY
- CBS News San Antonio, TX
- FOX News Dallas, TX
- Crime Line with Ed Nowicki (Nationally Syndicated Radio Program)

Research Papers Delivered

- "Basic Training Needs Assessment" *MS Assoc. of Chiefs of Police 2017*
- "Impact Weapon Training Analysis" *Delivered to MS BLEOST and Academy Directors, 1993*
- "Use of Force Policy Considerations on OC Agent Selection"
Distributed by MS Municipal Services Risk Mgt., 1993

- “Physical Training Standards” *Delivered to MS BLEOST, 1993*
- “Analysis of BLEOST Physical Training Standards” *Delivered to MS BLEOST, 1995*
- “Ground Fighting and Assaults on Police Officers”
Delivered to PPCT International Conference, 2000
- “Ground Fighting and Assaults on Police Officers”
Delivered to the ASLET Conference, Orlando, F, 2000
- “Pursuit Policy in MS Police Agencies, The “Brister Effect”, *MACP 2010*

Periodicals and Professional Journals

- Several articles on law enforcement topics for:
 - *The Police Marksman Magazine*
 - *Police Magazine*
 - *The Journal of the American Society of Law Enforcement Trainers (ASLET)*
 - *ITOA News (Illinois Tactical Officers Association)*
- Most Recent Publications:
 - Calibre Press Street Survival Textbook, “Critical History”, © 2003
 - Police Marksman Magazine, “Ground Assaults on Officers”, © December 2004
 - Litigation Body Armor: Developing Sound Pursuit and Use of Force Protocol © 2010

Internet Publications and Training

- Training Section for Criminal Justice Training Network “*Search, Seizure and Arrest Issues*” 1998
- Policy Issue for OFFICERNET.COM, “*A Little Policy Never Hurt Anyone*”, 2000
- Calibre Press Newsline “*Critical History, A Review of Officer Survival History*” 2003

Training Conducted:

Basic Level Law Enforcement Training and Lectures

- MS State Academy
- University of Southern MS/Harrison Co SO Academy
- Hinds Community College, Jackson, MS
- No. FL Comm. College FL
- Greater Jackson County Law Enforcement Training Consortium
- Palace Casino Resort Security Risk Management, Biloxi, MS
- Margaritaville Casino Security, Biloxi, MS
- Approx. 10,000 officers annually for Calibre Press Street Survival Seminar (2000-2003)

Instructor Level Training/Lectures

Several, including:

- National Nuclear Security Administration (United States)
- Cuiaba, Brazil (AG’s office, Federal Police, Military Police)
- Rondonopolis, Brazil (AG’s office, Federal Police, MP)
- St. Croix/St. Thomas, US Virgin Islands Police
- Hong Kong, China Correctional Services Staff Training Institute
- US Fish & Wildlife, Federal Law Enforcement Training Center
- US Park Service Special Operations Ranger School
- Honolulu PD Academy

- New Orleans PD Academy
- Jefferson Parish, LA Academy
- Jackson, MS PD Academy
- East Texas Police Academy
- United States Armed Forces Units (*all branches*)
- United States Department of Defense
- United States Coast Guard TACLETS, Miami, FL
- Hard Rock Casino Biloxi Security Management/Risk Management
- Minot, ND PD and Surrounding Agencies

Peer Conference Presentations

- MS Municipal Risk Management for Law Enforcement Executives Ridgeland, MS 2018
- MS Municipal Risk Management for Law Enforcement Executives Vicksburg, MS 2017
- MS Municipal Risk Management for Law Enforcement Executives Oxford, MS 2017
- MS Assoc. of Chiefs of Police, 2016 Conference, Risk Mgt. for Law Enforcement Executives
- MS Municipal Risk Management for Law Enforcement Executives Grenada, MS 2015
- MS Municipal Risk Management for Law Enforcement Executives Hattiesburg, MS 2015
- Valdosta State University Chiefs' Conference, GA 2014
- CLEAT Leadership Conference, Austin, TX 2013
- Western IL University, Executive Institute, Use of Force Executive Summit 2010
- ASLET 2006, Albuquerque, NM Keynote Speaker
- ASLET 2005, Jacksonville, FL, Served on an expert panel for use of force training issues.
- ASLET 2001, Orlando, FL, Delivered presentation on Officer Survival and Use of Force
- ASLET 1995, Anchorage, AK, Delivered presentation on Survival Learning Theory
- ASLET 1994, Washington, DC, Delivered Stress Response Research Instruction
- MS Assoc. for Professionals in Corrections, 1990 Management of Use of Force
- MS DARE Officers Conference, 1994, Gangs
- PPCT Management International 1995, Stress Response Training Issues
- PPCT Management International 1997, Skills for Performance in Off. Surv. Training
- PPCT Management International 2000, Stress Response Training Issues
- MS Assoc. of Chiefs of Police, 1997, Training on a Budget

Expert Testimony and Depositions Given Past Four Years:

- Williams v. City of Natchez, MS
- Gammel v. Coahoma Co. Community College, MS
- State of CA vs. Deputy Dayle Long
- Skinner v. Hinds CO SO, MS
- Salvato v. Marion CO, FL
- Hasskamp v. Orange CO, FL
- Brown v. Orange CO, FL
- Washington v. City of Waldo, FL
- State of MS v Terry Beadles
- Hale v City of Biloxi, MS
- Patel v. City of Madison, AL
- Perez v Collier Co., FL
- Hajali v. New Castle Co. and Daller
- Docher v St. Lucie County, FL

Employment Credentials:

- **March 2015 – Present** Chief of Police
Ocean Springs, MS Police Department
- **August 2007 – March 2015** Deputy Chief of Police
Ocean Springs, MS Police Department
- **July 2003 – August 2007** Captain, Training and Standards
Ocean Springs, MS Police Department
- **March 2000 – December 2003** Instructor
and October 2010 – Dec 2012 Calibre Press Street Survival Program
Dallas, TX (Corporate Office)
- **April 1998 – March 2000** Training Coordinator/Trainer
Mississippi Police Corps
University of Southern Mississippi
Hattiesburg, MS
- **September 1996 – April 1998** Chief of Police
(Interim July 2001-September 2001) City of Long Beach, MS
- **May 1996 - September 1996** Director of Training/Content Expert,
Law Enforcement Television Network
Carrollton, TX
- **October 1991 - May 1996** Director (Captain)
North Mississippi Law Enforcement Training
Center
Commander, Special Operations Group
Tupelo Police Department, City of Tupelo, MS
- **September 1989 - October 1991** Specialized Training Coordinator and Instructor
MS Law Enforcement Officers' Training Academy
Jackson, MS
- **November 1988 – Sept. 1989** Police Officer, HRU Team Member
City of Panama City Beach, FL
- **May 1985 - November 1988** Police Officer - Police Sergeant
City of Ocean Springs, MS
- **January 1984 - May 1985** Deputy (Res.) Jackson County SO, Pascagoula, MS

Mark S. Dunston
PO Box 1706
Ocean Springs, MS 39566-1706
(228) 348-1189

Litigation Consultant Letter of Agreement/Fee Schedule

This letter serves as an agreement and contract between _____ (client) and Mark S. Dunston. The client, in retaining the services of Mark S. Dunston, agrees to the following fee schedule and obligations of both parties.

1. Hourly fee for service is \$ 150.00 US per hour.
2. Initial retainer of three thousand dollars (\$3,000.00 US) is required prior to delivery of opinion or report.
3. After completion of retainer of service, billing will continue at \$150.00 US per hour. All invoices are net 30 days.
4. Settlement of a case does not warrant a refund of any fees paid.
5. Travel is paid in advance or direct billed to the client by the source, i.e. hotel, airline, etc.
6. Travel will not exceed current reasonable and customary rates (full coach fare air travel, current government rate mileage, etc.)
7. Deposition requires minimum of eight hours, \$1200.00, paid in advance of deposition testimony. After eight hours, hourly fee applies. Travel time above minimum hours for deposition will be calculated in advance and paid in advance at hourly rate.
8. The use of the name Mark S. Dunston in any form indicating that Mark S. Dunston has been retained is to be considered contractual and requires the minimum retainer payment.
9. The fees paid to Mark S. Dunston are for his time. The client will not consider it a payment to influence his opinion or testimony.
10. Any work product requested of Mark S. Dunston will be delivered to the client by the agreed scheduled date.

On behalf of the client, I, _____, agree to the
Print Name
terms as set forth in the above Letter of Agreement and Fee Schedule.

Signature
For the Client

Mark S. Dunston

_____ Date

EXAMPLES OF NON-DISCRETIONARY ARRESTS		
	<u>MSCA</u>	<u>General Description</u>
1	99-21-1	Foreign Warrant;Fugitive;Holdi
2	97-9-9	Bribery;Commercial Bribery
3	97-9-65	Intimidation of Witness to Com
4	13-5-34	Contempt of Court for Failure
5	97-9-105	Hindering prosecution in the First degree
6	97-9-125	Tampering
7	97-9-127	RETALIATION AGAINST A PUBLIC SERVANT OR WITNESS
8	97-9-25	Escape - Aid/abet
9	97-9-29	Escape - Aid-abet
10	97-9-41	Harboring a Fugitive
11	97-9-45	Escape - MDOC
12	97-9-49(1)	Escape of Prisoners
13	97-9-49(2)	Escape - Inmates/trusties
14	97-9-55	Obstructing Justice/intimidati
15	97-45-19	Computer: Identity Theft or At
16	97-5-1	Child, Abandonment of Child un
17	97-5-23	Touching Child for Lustful Pur
18	97-5-23(1)	Touching Child for Lustful Pur
19	97-5-23(3)	Computer luring of person unde
20	97-5-27	Sexually-oriented Material: Di
21	97-5-3	Descertion or non -support of
22	97-5-33	Exploitation of Children
23	97-5-39(1)	Contributing to the Neglect or
24	97-5-39(2)	Child,Abuse/Battery Causing Se
25	97-5-40	Child Abuse - Condoning
26	97-5-49	Social Host
27	97-37-17(2)	97-37-17(2) Weapons, P
28	97-37-19	Discharging/Displaying firearm
29	97-37-29	Shoot into Dwelling
30	97-37-35	Possession of Stolen Firearm
31	97-37-35(1)	Possess,Receive,Retain,Acquire
32	97-37-5	Felon Carrying Concealed Weapo
33	97-41-1	Animals, Cruelty to
34	97-3-107	Stalking
35	97-3-109	Drive-by Shooting
36	97-3-117	Carjacking/Attempted Carjackin
37	97-3-117(2)	Armed Carjacking/Attempted Arm
38	97-3-19(1)	Murder
39	97-3-19(2)	Capital Murder
40	97-3-25	Manslaughter

EXAMPLES OF NON-DISCRETIONARY ARRESTS		
	<u>MSCA</u>	<u>General Description</u>
41	97-3-47	Manslaughter (Culpable Neglige
42	97-3-53	Kidnaping
43	97-3-54	Human Trafficking
44	97-3-65	Rape; Carnal Knowledge of Chil
45	97-3-65(1)	Statutory Rape
46	97-3-65(4)(a)	Rape
47	97-3-7(1)	Simple Assault-Bodily Injury
48	97-3-7(1)(c)	Simple Assault-Attempt By Phyi
49	97-3-7(2)	Aggravated Assault
50	97-3-7(3)	Simple Domestic Violence;Simpl
51	97-3-7(4)	Aggravated Domestic Violence
52	97-3-71	Rape - Assault with Intent to
53	97-3-73	Robbery
54	97-3-75	Robbery - Simple
55	97-3-79	Robbery - Armed
56	97-3-95	Sexual Battery
57	97-19-17	Credit Cards - Forgery
58	97-19-21	Fraud - Credit Card
59	97-19-23	Fraud - Credit Card
60	97-19-33	False Impersonation
61	97-19-35	False Personation
62	97-19-37	False Personation; Masqueradin
63	97-19-39	False Pretenses
64	97-19-55	Bad Checks - Penalties/Restitu
65	97-19-67	Bad Checks - Penalties/Restitu
66	97-19-71(2)	Fraud; Food Stamps
67	97-19-71(4)	Fraud; Filing for Services Not
68	97-19-83	Fraud - by Mail/phone/newspape
69	97-19-85	Fradulent Use of Identificatio
70	97-21-29	Making and Uttering Instrument
71	97-21-33	Forgery
72	97-21-37	Counterfeit Instrument: Poss.
73	97-21-49	Counterfeit Instrument: Sale o
74	97-21-59	Counterfeit Instrument: Forger
75	97-23-103	Home Repair Fraud
76	97-23-19	Embezzlement - Agents/trustees
77	97-23-23	Embezzlement - Receiving Stole
78	97-23-27	Embezzlement - Property Borrow
79	97-23-93	Shoplifting
80	97-25-55(2)	Assault with Intent to Commit
81	97-17-23	Burglary; Inhabited Dwelling H

EXAMPLES OF NON-DISCRETIONARY ARRESTS		
	<u>MSCA</u>	<u>General Description</u>
82	97-17-25	Burglary; Breaking Out of Dwel
83	97-17-29	Burglary; Breaking Inner Door o
84	97-17-33	Burglary - All but Dwelling
85	97-17-33(1)	Burglary; All but Dwelling
86	97-17-33(2)	Burglary; Church, Synagogue, T
87	97-17-35	Burglary - Possession of Burgl
88	97-17-39(B)	Public Property, Church Buildi
89	97-17-41	Larceny - Grand
90	97-17-41(1)(a)	Grand Larceny; Personal Proper
91	97-17-41(1)(b)	Grand Larceny; Property of a C
92	97-17-41(4)	Grand Larceny; Motor Vehicle, Se
93	97-17-42	Taking Away of a Motor Vehicle
94	97-17-43	Larceny - Petit
95	97-17-43(1)	Petit Larceny; Personal Proper
96	97-17-43(2)	Petit Larceny; Property of a Ch
97	97-17-43(3)	Petit Larceny; Motor Fuel
98	97-17-5	Arson - Structure: Not Dwellin
99	97-17-61	Larceny; Taking or Carrying Awa
100	97-17-64	Theft by Rental Agreement
101	97-17-67	Malicious Mischief
102	97-17-70	Receiving Stolen Property
103	97-17-85	Trespass upon Enclosed Land of
104	97-17-87	Trespass, Willful
105	97-17-97	Trespass after Notice of Non-p
106	97-19-17	Credit Cards - Forgery
107	7-5-303	Insurance Fraud
108	75-73-9	Fraud - Innkeeper

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF MISSISSIPPI
JACKSON DIVISION**

LATOYA BROWN, et al.

PLAINTIFFS

v.

CIVIL ACTION NO. 3:17-cv-347 WHB LRA

MADISON COUNTY, MISSISSIPPI; et al.

DEFENDANTS

DECLARATION OF MARK DUNSTON

I, Mark Dunston, make the following declaration based on personal knowledge:

1. I have been retained by the Defendants in the above referenced matter as expert. I submit that the foregoing report from me dated May 8, 2018 is a true and accurate copy of the report I provided to Defendants in this matter. I declare that the information and opinions contained in the report are true and correct to the best of my knowledge.

I declare under penalty of perjury that the foregoing is true and correct. 28 U.S.C. § 1746.

May 8, 2018



MARK DUNSTON



INFRASTRUCTURE, SAFETY, AND ENVIRONMENT

CHILDREN AND FAMILIES
EDUCATION AND THE ARTS
ENERGY AND ENVIRONMENT
HEALTH AND HEALTH CARE
INFRASTRUCTURE AND
TRANSPORTATION
INTERNATIONAL AFFAIRS
LAW AND BUSINESS
NATIONAL SECURITY
POPULATION AND AGING
PUBLIC SAFETY
SCIENCE AND TECHNOLOGY
TERRORISM AND
HOMELAND SECURITY

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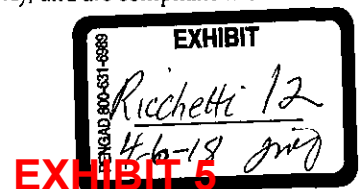
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Appeared as Chapter 7 in S. Rice and M. White (eds.), 2010, Race, Ethnicity, and Policing: New and Essential Readings (NYU Press) pp. 180–204

Methods for Assessing Racially Biased Policing

Greg Ridgeway
RAND Corporation

John MacDonald
University of Pennsylvania

Abstract

As part of the response to allegations of racially biased police practices many police agencies began collecting information on the stops made by their officers. Social scientists have attempted to use these administrative data on stop decisions to assess the existence or extent of racially biased policing and, in the process, have developed a number of benchmarks for comparison to police stop data. This chapter describes an array of benchmarking methods that have been used around the country including the use of U.S. Census population estimates, non-at fault driver crash data, crime and arrest data, drivers' license data, red light cameras, observations, instrumental variables, assessments of post-stop outcomes, and officer-to-officer comparison via internal benchmarks. Each method's application, strengths, and weaknesses are discussed in the context of their ability to establish a reasonable estimate of the population at risk for being stopped by the police and to draw a causal inference about the extent to which race is a relevant factor in police decision-making on whom to stop, question, and search.

INTRODUCTION

Over the past ten years there has been a proliferation of research that has attempted to estimate the level of racial bias in police behavior. Many police agencies now mandate that their officers record official contacts made with citizens during routine traffic or pedestrian stops. These administrative data sources typically include a host of information on characteristics of the stops made by police officers including: the race/ethnicity of the driver or pedestrian; reasons for the stop; and the actions that occurred after the stop, such as searches, contraband found, and citations or arrests made. These data have been the source for the majority of studies of racially biased police behavior. Analysts have sought to apply basic social science methods to assess whether police agencies as a whole, or in some cases individual police officers, are acting in a racially biased manner. A consistent theme in this research is the search for the appropriate

benchmarkⁱ for which one can quantitatively assess whether police behavior is conducted in a racially biased manner. Studies have linked police administrative data on stops made by officers to a variety of data sources including; police arrest data, population estimates collected by the Bureau of the Census; drivers license data; motor vehicle traffic accident data, moving violations data, systematic observations of drivers, and other sources. Analysts have also attempted to estimate racial bias from assessments of post-stop outcomes and examinations of the "hit rate" (contraband found) from searches. Post-stop outcomes have also focused on matching strategies to appropriately compare minorities and whites that were similarly situated. More recently, efforts have been made to assess individual police officer bias by peer-group officer comparisons.

In the following sections we outline the various methods that have been employed in studies of racially biased policing. We provide an overview of the use of external benchmarks, internal benchmarks, and post-stop outcomes analysis for assessing racial profiling. Our discussion is not an exhaustive review of the literature. Rather, we focus on assessing the methods, their appeal, and there substantive limitations. Developing an appropriate benchmark is more complicated than is presumed in media reports. All of the methods we review for assessing racially biased policing have weaknesses, but some approaches are clearly stronger than others. There is no unifying method that can be applied to administrative data sources and definitively answer the question of whether the police are acting with racial bias. A key issue we address is the fact that the majority approaches used do not meet the basic bedrock assumptions necessary for drawing a causal inference about the effect of race on police behavior. Yet, over time the methods have improved and the policy discussions have inevitably become more nuanced and productive leading to discussions about what the police should and should not be using as pretexts for their decisions on whom to stop and question.

EXTERNAL BENCHMARKS

There is a compulsion in media reports on racial disparities in police stops to compare the racial distribution of the stops to the racial distribution for the community's population as estimated by the US Census. For example, in 2006 in New York City, 53% of stops police made of pedestrians involved black pedestrians while according to the US Census they comprise only 24% of the city's residential population. When the two racial distributions do not align, and they

ⁱ This is sometimes referred to as the denominator from the standpoint that the proportion of minority stops should be divided by the population at risk (e.g., % black stops/% blacks at risk for being stopped) to provide an appropriate adjustment for detecting racial disparities.

seem to do so rarely, such statistics promote the conclusion that there is evidence of racial bias in police decision making. Racial bias could be a factor in generating such disparities, but a basic introductory research methods course in the social sciences would argue that other explanations may be contributing factors. For example, differences by race in the exposure to the police and/or the rates of committing offenses may also contribute to racial disparities in police stop decisions. It is well documented, for example, that due to historical differences in racial segregation, housing tenure, poverty, and other sociopolitical factors minorities in the US are more likely to live in neighborhoods with higher rates of crime and disorderⁱⁱ. Police deployment in many cities also corresponds to differences in the demand for police services. Neighborhoods with higher volumes of calls to the police service typically have a higher presence of policeⁱⁱⁱ. Additionally, research indicates that racial minorities, and in particular blacks, are disproportionately involved in serious personal offenses as both victims and offenders.^{iv}

The crux of the external benchmarking analysis is to develop a benchmark that estimates the racial distribution of the individuals who would be stopped if the police were racially unbiased and then comparing that benchmark to the observed racial distribution of stopped citizens. The external benchmark can be thought of as the population at risk for official police contact. As we will see, estimating the appropriate population at risk is complicated. Crude approximations of the population at risk for police contact are poor substitutes and can hide evidence of racial bias or lead to exaggerated estimates of racial bias.

The racial composition of the stops made by the police involves some combination of police exposure to offending/suspicious activity, the racial distribution of the population involved in those activities, and the potential for racial bias. To provide some context, we use some hypothetical numbers and consider an unbiased officer on a foot post who makes stops only when a pedestrian matches a known suspect description. This officer works in a precinct with 40 blacks matching suspect descriptions and 40 whites matching suspect descriptions. If we could somehow measure such numbers we would be inclined to propose a suspect-description benchmark of 50% black and 50% white. However, if the routine daily activities of whites and blacks differ than the officer will encounter different proportions of suspects by race. Say, for example, that the majority of the 40 white suspects stay inside most of the day, travel only by car, or avoid the specific areas with high

ⁱⁱ Sampson, R. and W.J. Wilson. *Toward a theory of race, crime, and urban inequality*, pp. 37–54.

ⁱⁱⁱ Skogan. *Disorder and decline: Crime and the spiral of decay in American neighborhoods*.

^{iv} Hindelang. *Variations in sex-age-race incidence rates of offending*, pp. 461-475.

police presence, then this officer will stop only a small number of white suspects, deviating substantially from the 50 percent benchmark. Even the less extreme situation, in which half of the white suspects are exposed to the officer, results in the officer stopping blacks in 67 percent of all of their stops decisions. The suspect benchmark in this context is only valid if the police are equally exposed to suspects from the various racial groups. Therefore, even with unbiased officers, we cannot necessarily expect what seems like a reasonable external benchmark to match the racial distribution of stops. This example effectively demonstrates that any of the external benchmarks described in this section must be viewed with caution.

The primary reason for using US Census data to form the benchmark is that it is inexpensive, quick, and readily available. A number of studies attempting to assess racial bias in police behavior use population data from the census, some rely on estimates at local area levels like neighborhood census tracts (see Parker and Stults in this volume). However, for the reasons previously listed, benchmarking with census data does not help us isolate the effect of racial bias from differential exposure and differential offending. Even refinements to the residential census, such as focusing on subpopulations likeliest to be involved in crime (e.g., men or driving age young adults) are not likely to eliminate differences in the exposure of officers to criminal suspects or provide a good approximation of the population at risk for official police action. Fridell^v summarized the problem with using the census as a benchmark with regard to offender exposure by noting that, "this method does not address the alternative hypothesis that racial/ethnic groups are not equivalent in the nature and extent of their . . . *law-violating behavior*" (p. 106, emphasis in original).

Census estimates provide only the racial distribution of residents and not how these numbers vary by time of day, business attractors such as shopping centers, daily traffic patterns involving commuters, etc. It is quite conceivable that the residential population in many neighborhoods has little resemblance to the patterns of people on the street during the day or night. Even if refinements in the census to the neighborhood or age-prone population at risk for police involvement could give a racially unbiased estimate of the population at risk for police contact, the differences between the residential population and the population at different times of the day and street segments are likely to overwhelm such an estimate. Commuting patterns, for example, can easily exaggerate the racial disparities in traffic stops. Imagine that 20% of traffic stops in a neighborhood that is 95% non-white are made of white citizens. In this context we would suggest whites are stopped 4 times the rate of their composition of the neighborhood population

^v Fridell. By the numbers: A guide for analyzing race data from vehicle stops.

(20/5=4) and are subjects of racially biased police behavior. However, the stop rate may be a simple reflection of the fact that daily commuters reflect 20% of drivers in this neighborhood.

Dissatisfaction with the census as a benchmark has led some researchers to develop alternate external sets of benchmarks. Some studies of traffic stops attempt to acquire more precise estimates of the racial distribution of drivers on the road to serve as the external benchmark. Under such an approach, one should be able to compare the race distribution of traffic stops made by the police to the race distributions of drivers on the same roadways. Zingraff and colleagues^{vi}, for example, used the race distribution of licensed drivers rather than the residential population to estimate the race distribution of drivers at risk of being stopped by the police. Although this approach accounts for racial differences in the rate at which the population holds driver's licenses, it does not account for out-of-jurisdiction drivers or for potential racial differences in travel patterns, driving behavior, or exposure to police. To address the problem with out-of-jurisdiction drivers Farrell and colleagues^{vii} borrowed driving population models from the transportation literature, which use an area's ability, based on employment or retail location, to pull drivers in from outside communities or to push residents outside the area. This certainly improves upon the census benchmark. However, it is widely documented that minorities (and even those who possess a driver's license) are more likely to take public transit to work and vary from whites in other important ways in their daily travel patterns. Therefore, a more accurate external benchmark would be one that could reliably take into account equivalent driving patterns and behavior between race groups.

Recognizing these limitations, Alpert and colleagues^{viii} used data on the location of traffic accidents and the race of the not at-fault drivers to estimate the race distribution of the at-risk population. The logic of this approach is that the race distribution of not-at-fault drivers should approximate the racial distribution of the population of drivers. Although this approach may measure the race distribution of drivers on the road, it does not account for potential racial differences in driving behavior that may be important sources for police decision-making, such as the likelihood of speeding, weaving through traffic, and driving slower than usual.

^{vi} Zingraff, et al. Evaluating North Carolina state highway patrol data.

^{vii} Farrell et al. Rhode Island traffic stop statistics act.

^{viii} Alpert, et al. Toward a better benchmark: Assessing the utility of not-at-fault traffic crash data in racial profiling research.

Other analysts have studied the race distribution of drivers flagged by photographic stoplight enforcement cameras^{ix} and by aerial patrols.^x The advantage of these benchmarks is that they are truly race-blind and measure some form of traffic violation. One can question whether they capture race differences in other aspects of stop risk, such as seatbelt usage, equipment violations, and the other cues that police use in deciding whether or not to stop a citizen.^{xi}

Given that the police are not likely to stop people at random, comparisons of racial distribution of stops to the residential population or the driving population on the roadways tells one very little about the race neutrality of the police. Again, it is necessary to establish a benchmark for the population at risk for official police contact. This means that one needs an accurate estimate of the subpopulation that is likely to elicit reasonable suspicion by the police.

Observation benchmarks

Observation benchmarks are a popular approach for attempting to estimate the subpopulation at risk for police behavior. Observation benchmarks typically involve fielding teams of observers to locations to tally the racial distribution of those observed driving and violating traffic laws. More than three decades ago Albert Reiss Jr. advocated the use of systematic social observation as a key measurement strategy for studying the police and other social phenomena.^{xii} By systematic, he meant that the observation of behaviors and recordings are done according to explicit standardized rules that permit replication.

This methodology was pioneered to study racial bias in police traffic stops by Lamberth^{xiii} in his study of the New Jersey turnpike. Observation benchmarks greatest potential occurs in its application to racial profiling on freeways, since vehicles have essentially the same exposure to the police and speeding is the primary violation that highway patrol focuses on. Speeding, for example, accounted for 89% of the stop reasons in a subsequent study of New Jersey turnpike traffic stops.^{xiv} Measuring speeding through direct observations with radar

^{ix} Montgomery County Department of Police, Traffic stop data collection analysis.

^x McConnell, et al. Race and speeding citations: Comparing speeding citations issued by air traffic officers with those issued by ground traffic officers.

^{xi} Alpert, et al. Police suspicion and discretionary decision making during citizen stops, pp. 407-434.

^{xii} Reiss, Systematic social observation of natural social phenomena, pp. 3-33.

^{xiii} Lamberth, Revised statistical analysis of the incidence of police stops and arrests of black drivers/travelers on the New Jersey Turnpike.

^{xiv} Maxfield, R. and G. Kelling. New Jersey State Police and stop data.

guns, for example, provides a standardized approach that is easy to replicate and less subject to measurement error than accounting for other types of traffic violations that require observers to make judgments about infractions like weaving through traffic or making illegal turns. Lang and colleagues^{xv} and Alpert and colleagues provide two case studies using radar guns.^{xvi} The main wrinkle in the analysis of benchmarks based on observation of speeding is determining the appropriate speed at which drivers should be considered “at-risk” for being stopped in specific sections of the highway. For example, it is conceivable that in some areas the police are more vigilant with speeding. As long as this variation is not confounded with differences in the areas that minorities and whites travel than it can provide an unbiased assessment of racial disparities in highway traffic stops.

In urban environments, however, officers stop vehicles for a variety of reasons beyond simple moving violations. Exposure to police can vary widely across different geographic segments of the city.^{xvii} In the current volume the reader will note that a number of authors attempt to take the intra-city variation in exposure to the police into account (see e.g., Fagan and Davies). Eck and colleagues^{xviii} note that in the city of Cincinnati the police allocate a greater share of officers to areas with a higher volume of crime incidents, and these areas happen to be comprised of predominantly black residents. Relying on direct observations of traffic violations in different segments of the city of Cincinnati would not provide an unbiased assessment of the population at risk for police exposure, because race is confounded with the areas that police are concentrated. One would have to develop an observation method that appropriately balanced these differences in police resource allocation.

There are few examples where investigators have attempted to take the complexity of geographic areas of a city into account in using observation methods. Alpert and colleagues^{xix} provide one of the few published studies where trained observers recorded traffic violations (e.g., illegal turns, running stop lights, speeding) at sixteen high volume intersections in Miami-Dade County in areas that were classified as predominately white, black, or racially mixed. A comparison of the racial distribution of observed traffic violators to actual police traffic stops in the same areas suggested little evidence of racial bias in stop decisions. Even if observers in this study did produce an accurate benchmark for individuals at risk

^{xv} Lange, et al. Speed violation survey of the New Jersey turnpike.

^{xvi} Alpert, et al., Investigating racial profiling by the Miami-Dade Police Department, pp. 25-56.

^{xvii} Smith, The Neighborhood context of police behavior, pp. 313-341.

^{xviii} Eck, et al. Vehicle police stops in Cincinnati.

^{xix} Alpert, et al., Investigating racial profiling by the Miami-Dade Police Department, pp. 25-56.

for exposure to the police in these areas—a challenge on its own right—several issues remain. There is no reason to believe that police stops should be representative of those simply observed in these areas committing traffic violations. Officers target behaviors that they believe indicate drug transactions, stop individuals fitting suspect descriptions, and respond to calls for service. Once observers head down the path of trying to determine which vehicles or persons should be at-risk for being stopped, the observations become more subjective and less systematic.^{xx} In fact, the variation between-observers in such studies can exceed the estimate of the racial disparity. One observer may be more likely than others to measure some driving behavior as aggressive. Such variation in judgments in an observation study has to be taken into account, or observers have to be trained to near uniformity in judgments if one is going to produce a reliable estimate of the population at risk for police contact. Regardless, it is unclear that observational studies are relying on the same sets of markers that the police use in deciding who is suspicious and whom to stop. The courts have not consistently supported the use of observational benchmarks for this reason. In *United States v. Alcaraz-Arellano*^{xxi} the court rejected the benchmark, since it was developed for a general population, not those violating the law.

Outside of traffic stop studies on speeding or moving violations on roadways, systematic observations of driving behavior are not likely to yield useful estimates for an external benchmark for an entire city. Recognizing these limitations a number of investigators have turned to other approaches for establishing external benchmarks.

Arrest and crime suspect benchmarks

Gelman, Fagan, and Kiss^{xxii} quote then-NYPD Police Commissioner Howard Safir:

The racial/ethnic distribution of the subjects of stop and frisk reports reflects the demographics of known violent crime suspects as reported by crime victims. Similarly, the demographics of arrestees in violent crimes also correspond with the demographics of known violent crime suspects. (2007, p. 4)

Safir is clearly suggesting that violent crime suspects or violent crime arrestees provide a reasonable benchmark from which the public can judge the department's racial distribution in stop percentages. This quote suggests that the

^{xx} Ibid.

^{xxi} 302 F. Supp. 2d 1217, 1229–1232, D. Kan., 2004

^{xxii} Gelman, et al. An analysis of the New York City Police Department's "stop-and-frisk" policy in the context of claims of racial bias, pp. 813–823.

arrestee population may serve as a useable benchmark for assessing racial bias in the police decision for whom to stop.

The arrestee benchmark, however, is also problematic because it is too narrow. For example, the police make stops for trespassing, vandalism, suspected drug sales, and a variety of other causes. Many stop decisions might be made for minor infractions, not serious crime incidents involving violence. The group of individuals stopped by the police in most large cities, therefore, far exceeds the group comprising the arrestee population. There are a variety of reasons that the racial distribution of individuals stopped by the police could have a race distribution that differs greatly from that of arrestees. For one, arrests can often take place some distance away from where the crime actually occurred. Most problematic is that, if officers are in fact racially biased then we cannot use their arrests to represent what we would expect of an unbiased police force. Such a benchmark could actually hide bias. Investigators like Gelman and colleagues have attempted to control for this by using prior year arrest decisions as an external benchmark. Again, there is no reason to expect that previous year decisions are independent of current year decisions – especially if as research by Klinger^{xxiii} suggests an established pattern of practices becomes ingrained in specific police precincts.

The criminal suspect benchmark may be more plausible approach than the arrestee benchmark for establishing the population at risk for official police contact. It represents the public's reporting of those involved in suspicious activity and crime and would correspond more closely to racial distribution of criminals on the street.^{xxiv} Note that this benchmark is not a reasonable choice for traffic stops since often police have the intent to cite for a traffic violation without the expectation that it will lead to an arrest. Comparing the police to the public's reporting of suspicious activity at least answers the question whether the police are finding suspicious individuals with features similar to those the public reports committing or attempting to commit crimes. Ridgeway, for example, found that in New York City black pedestrians were stopped at a rate 20 to 30 percent lower than their representation among the public's report of crime-suspect descriptions and Hispanic pedestrians were stopped slightly more than their share of crime suspect descriptions, by 5 to 10 percent.^{xxv} However, the public may have their

^{xxiii} Klinger, Negotiating order in patrol work: An ecological theory of police response to deviance, pp. 277–306.

^{xxiv} For a discussion of the benefits and limitations of citizens' calls for police service data see Klinger, D. and G. Bridges. Measurement error in calls-for-service as an indicator of crime, pp. 705-726.

^{xxv} Ridgeway. Analysis of racial disparities in the New York Police Department's stop, question, and frisk practices.

own racial biases and they may also under or over-report certain activities (e.g., drug market activity, suspicious individuals) depending on the area and the perceived problems that the police actively target.

Instrumental variables

An ideal scientific method to estimate the extent of race bias in policing would be to use an experimental design and randomly assign police officers to be “race blind” during certain periods. For example, for each officer and for each hour that officer patrols the street we flip a coin to determine whether that officer will be unable to perceive the race of a suspect. The difference between the percentage of stops involving minorities when the officers can perceive race to the percentage of stops involving minorities when the officers are race blind gives us the effect of racial bias. If the officers were unbiased then the ability to perceive race should not matter in the selection of stopped individuals. If instead the officers are racially biased then we would observe more minority stops when the officers are not blinded to race.

Clearly such an experiment in the actual field is a fantasy, but instrumental variables (IV) analysis is an econometric approach that can sometimes solve such problems.^{xxvi} Instrumental variables analysis relies on the randomization that occurs in nature to replicate the classic randomized experimental design. The key hurdle is to identify an “instrument,” in this case a variable that is predictive of the ability to perceive race^{xxvii} that is not related to the actual race of suspects^{xxviii}. This is a generalization of the setup in the previous paragraph where our coin is the instrument, highly predictive of the ability to see race but unassociated with the race of potentially stopped individuals.

Grogger and Ridgeway^{xxix} proposed as an instrument the natural variation in daylight and darkness that switches with the change in daylight savings. It is associated with the ability to perceive race but is not related to the race of drivers on the road. The randomization in nature that diminishes the ability of officers to view the actual race of suspects during specific times of the year may serve as an effective instrument for assessing racial bias in police traffic stops. Presumably the probability of race being visible is greater in daylight. Besides the logic of the

^{xxvi} For technical details see Angrist, et al. Identification of causal effects using instrumental variables, pp. 444-455.

^{xxvii} This is known as the nonzero average causal effect of the instrument on actual treatment assignment.

^{xxviii} This is known as the exclusion restriction.

^{xxix} Grogger, J. and G. Ridgeway. Testing for racial profiling in traffic stops from behind a veil of darkness, pp. 878-887.

statement, there is some evidence from the literature supporting this. Lamberth described a traffic survey in which the driver's race could be identified in 95% of the vehicles, but for which nighttime observations required auxiliary lighting.^{xxx} Greenwald canceled plans for evening surveys after his observer could identify the race of only 6% of the drivers viewed around dusk.^{xxxi}

The logic of this approach goes back to the work of Neyman^{xxxii} in the 1920s and is a special case of more general instrumental variable methods. We first have to difference the percentage of black drivers among those stopped between daylight and the percentage of black drivers stopped during darkness. Second, to account for the fact that sometimes race is not visible during the day and can be visible at night, the difference in the percentage of blacks stopped needs to be divided by the difference in the probability of race being visible in daytime and darkness. Importantly, this estimate does not require complete race blindness at night and complete visibility during the day, only a substantive diminished capacity.

One of the difficulties that Grogger and Ridgeway faced when attempting to estimate this instrumental variable is that there is no direct measure of diminished capacity due to changes in daylight, the second step of the described IV estimator. A controlled scientific experiment could be conducted to estimate visibility by daylight and darkness, but this might not reflect the types of lighting situations that officers commonly experience on the streets, especially in parts of the city that are better lit than others. As a result Grogger and Ridgeway's analysis simply assumed, logically, that the denominator is positive, such that the probability of race being visible is greater in daylight.

The validity of this instrument also depends on race being independent of daylight/darkness visibility. However, the race distribution of drivers on the road and exposed to the police may be quite different between daylight hours and nighttime hours. If there were mostly black drivers on the road at night then the analysis would indicate that officers stop an excessive fraction of black drivers during the night, but this would just be because there are a larger proportion of black drivers on the road at night. To correct this potential confound Grogger and Ridgeway controlled for clock-time and compared stops occurring near the changes to and from daylight savings time. On one Monday stops at 6pm occur in daylight and the following Monday stops at 6pm occur in darkness. If we can assume that the race distribution of drivers on the road at 6pm does not change

^{xxx} Lamberth. Racial profiling data analysis study: Final report for the San Antonio Police Department.

^{xxxi} Greenwald. Final report: Police vehicle stops in Sacramento, California.

^{xxxii} Neyman. On the application of probability theory to agricultural experiments.

with daylight savings time and that the police do not suddenly reallocate their officers, then this provides a valid instrument.

Figure 1 demonstrates the idea using data from the City of Oakland. The horizontal axis indicates the clock time and the vertical axis indicates hours since dark. Throughout the analysis, we omit stops carried out during the roughly 30-minute period between sunset and the end of civil twilight, since that period is difficult to classify as either daylight or dark. The solid points indicate stops of black drivers, whereas open circles represent stops of non-black drivers. At any time between 5:19 and 9:06 pm, some stops are carried out when it is dark (gray shading) and some are carried out when it is light (no shading). The diagonal bands are a result of the natural variation in daylight hours over the course of the study period. In particular, the large diagonal gap is a result of the shift from Pacific Daylight Time to Pacific Standard Time at the end of October. This shift is especially useful for our comparison since it creates extremes in visibility for fixed clock times.

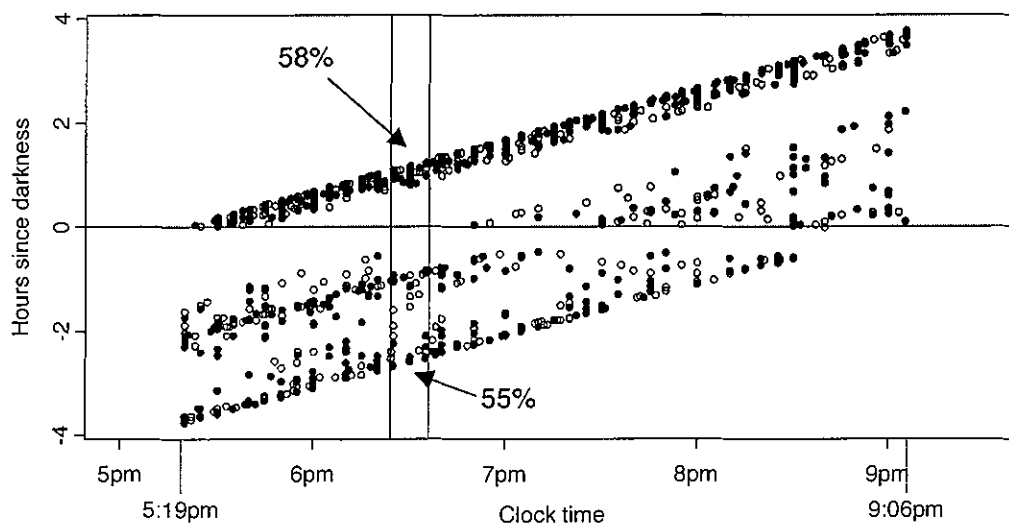


Figure 1: Plot of stops by clock time and darkness. The solid points indicate black drivers and the open circles represent non-black drivers. The shaded region indicates those stops occurring after the end of civil twilight. The large diagonal gap is a result of the shift from Pacific Daylight Time to Pacific Standard Time. The figure excludes stops occurring between sunset and the end of civil twilight. The vertical lines near 6:30 pm mark the example region discussed in the text. (Reproduced from Grogger and Ridgeway 2006)

The vertical lines in Figure 1 mark a period around 6:30 pm within which we can assess whether darkness influences the race of drivers stopped. During daylight hours 55% of the stops involved black drivers, while stops after dark involved black drivers in 58% of the stops, a slight difference and, if anything, runs counter to the racial profiling hypothesis.

Schell, Ridgeway and colleagues provide a similar analysis of three years of traffic stops in Cincinnati and find similar null conclusions against racial bias in traffic stop decisions.^{xxxiii}

The instrumental variables approach here, however, does have limitations. First, this method assumes that the variation in daylight/darkness gives enough of a diminished capacity to effectively remove the importance of a suspect's race in the decision of whom to stop. If the police use car profiles, such as stylistic rims or other features that are correlated with race and social class, as the primary proxy for race then this approach will still yield an unbiased test of the race effect on police decisions but will be greatly underpowered because police will use these cues regardless of the level of daylight/darkness. Even if such proxies do not exist, the approach only measures the effect of race bias at those times of day that are sometimes light and sometimes dark. Since there is never daylight at 3am, we cannot estimate an effect of race for stops that occur at that hour.

INTERNAL BENCHMARKING

Recognizing the difficulty of assessing whether racial bias occurs on the aggregate in the decision to stop citizens has led some analysts to focus on the individual decision-making of police officers. The decision to stop a citizen is only one stage in the traffic stop process, at each stage at which police officers can introduce race bias in their decisions. Highly publicized examples of racial bias in police behavior can give an impression of systemic bias, even if the source of bias is only a few problem officers^{xxxiv} (see Weitzer in this volume).^{xxxv} The Christopher Commission in its assessment of abuse of police authority among the Los Angeles Police Department (LAPD), for example, noted that 10% of officers accounted for 27.5% of complaints of excessive force and 33% of all use of force incidents.^{xxxvi}

^{xxxiii} Schell, T., G. Ridgeway et al. Police-community relations in Cincinnati: Year three evaluation report.

^{xxxiv} Jefferis, et al. The effect of a videotaped arrest on public perceptions of police use of force, pp. 381–395.

^{xxxv} Weitzer, Incidents of police misconduct and public opinion, pp. 397–408.

^{xxxvi} Christopher. Report of the Independent Commission on the Los Angeles Police Department.

The methods described previously which attempt to examine bias at the departmental level, are unlikely to detect the problem if the source is a small share of individual officers, and, even if somehow there are enough biased officers to create enough statistical power to detect the problem at the department level, these previous methods do not identify potential problem officers.

Walker^{xxxvii} conceptualized the internal benchmark, a framework that compares officers' stop decisions with decisions made by other officers working in similar situational contexts. This method has been applied to department data in several localities and has been adopted as a part of several "early warning systems."^{xxxviii} At the Los Angeles Police Department (LAPD), the TEAMS II Risk Management Information System places officers in one of 33 peer groups.^{xxxix} Officers in the same peer group presumably are expected to conduct similar policing activities. If an officer exceeds certain thresholds for their peer group, such being in the top 1 percent on number of complaints or number of use-of-force incidents, the system generates an "action item" for follow-up. However, officer roles in LAPD are certainly more diverse than 33 groups can capture. Similar problems are likely in other audit systems which compute a "peer-officer-based formula" to flag officers^{xl} that does not take into account fully the variation in environments that officers in the same peer group work. Sometimes the peer group construction may be reasonable. For example, Decker and Rojek^{xli} matched each St. Louis police officer to all other officers working in the same police districts. It is unclear whether matching by district alone was sufficient to ensure validity, although they argued that officers rotated shifts sufficiently so as not to warrant concern.

While this process is useful for flagging potential problem officers, it has some drawbacks. First, if officers in the entire precinct are equally biased, the method will not flag any officers as being problematic. We must rely on other analyses to assess that issue. Second, officers whom the method flags as outliers may have legitimate explanations for the observed differences. For example, a Spanish-speaking officer may appear to make an excessive number of stops of Hispanic

^{xxxvii} See Walker, Searching for the denominator: Problems with police traffic stop data and an early warning system solution, pp. 63–95; Walker, S. The citizen's guide to interpreting traffic stop data: Unraveling the racial profiling controversy. Unpublished manuscript; and Walker. Internal benchmarking for traffic stop data: An early intervention system approach.

^{xxxviii} Walker. Early intervention systems for law enforcement agencies: A planning and management guide.

^{xxxix} Birotte. Training evaluation and management system (TEAMS) II audit, phase I (fiscal year 2007/2008).

^{xl} Walker. Early intervention systems for law enforcement agencies: A planning and management guide.

^{xli} Decker, S., and J. Rojek, Saint Louis metropolitan police department traffic stop patterns.

suspects, when, in fact, the Spanish-speaking officer gets called in to handle and document those stops. Such situations should be detectable when supervisors review cases. Otherwise, the method eliminates possible explanations based on time or place, so the range of explanations is limited.

The fundamental goal of internal benchmarking is to compare the rate of nonwhite-pedestrian stops for a particular officer with the rate of nonwhite-pedestrian stops for other officers patrolling the same area at the same time. Matching in this way assures us that the target officer and the comparison officers are exposed to the same set of offenses and offenders.

Ridgeway and MacDonald^{xlii} developed an internal benchmark methodology to compare the racial distribution of pedestrians/drivers whom individual police officers have stopped with that of pedestrians/drivers whom other officers in the same role have stopped at the same times and places. This method has been applied in case studies in both Cincinnati^{xliii} and New York City.^{xliv} Utilizing an approach based on propensity score weighting, doubly robust estimation, and false discovery rates these case studies attempt to customize the internal benchmark for each individual officer to a set of officers working in similar environments exposed to similar suspects and to control the risk too many officers being flagged as outliers (false positives). The first of the three stages in this process is, for each officer, to reweight the stops made by other officers so that they have the similar stop characteristics distributions.

Table 1 shows the results of this reweighting step for an example officer. Officer A made 392 stops. The method effectively identified 3,676 similarly situated stops made by other officers. These stops were selected as the benchmark group for Officer A because they were similar to Officer A's stops in terms of when they occurred (e.g., date, time of day), where they occurred (e.g., precinct, x-y coordinates), the assigned command of the officer making the stop, whether the officer making the stop was in uniform, and whether the stop was a result of a radio run. Figure 2 and Table 1 demonstrate that this collection of 3,676 is nearly identical to the officer's stops in several respects.

^{xlii} Ridgeway, G. and J. MacDonald. Doubly robust internal benchmarking and false discovery rates for detecting racial bias in police stops.

^{xliii} Ridgeway, G., et al. Police-community relations in Cincinnati: Year two evaluation report.

^{xliv} Ridgeway, G. Analysis of racial disparities in the New York Police Department's stop, question, and frisk practices.

Table 1: Construction of an Internal Benchmark for a Sample Officer

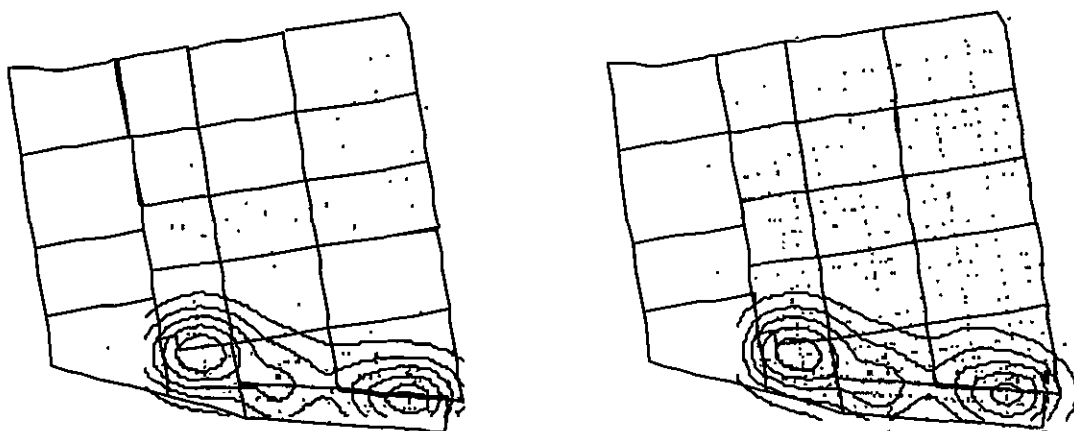
Stop Characteristic		Officer A (%) (N = 392)	Internal Benchmark (%) (N = 3,676)
Month	January	3	3
	February	4	4
	March	8	9
	April	7	5
	May	12	12
	June	9	9
	July	7	7
	August	8	9
	September	10	10
	October	11	10
	November	11	11
	December	9	10
Day of the week	Monday	13	13
	Tuesday	11	10
	Wednesday	14	15
	Thursday	22	21
	Friday	15	16
	Saturday	10	11
	Sunday	15	14
Time of day	[12–2 a.m.]	11	11
	[2–4 a.m.]	5	5
	[10 a.m. –12 p.m.]	0	1
	[12–2 p.m.]	12	13
	[2–4 p.m.]	13	12
	[4–6 p.m.]	9	10
	[6–8 p.m.]	8	8
	[8–10 p.m.]	23	23
	[10 p.m. –12 a.m.]	17	17
Precinct	A	0	0
	B	98	98
	C	1	1
	D	1	0
Occurred inside?		4	6
Housing or transit	Transit	0	0
	Housing	0	0
	Other	100	100

Stop Characteristic		Officer A (%) (N = 392)	Internal Benchmark (%) (N = 3,676)
In uniform	Yes	99	97
Radio run	Yes	1	3

NOTE: The numbers in the table indicate the percentage of stops having that feature.

Furthermore, as shown in Figure 2, the distribution of the locations of the stops can be aligned geographically so that regions of this officer's stops in 2006 can be compared to other officers making stops in the same region.

Figure 2: Maps of the sample officer's stops and of similarly situated stops made by other officers



NOTE: The left map shows the sample officer's stops; the right map shows similarly situated stops made by other officers. The contours indicate the regions of the maps with the highest concentrations of stops.

An additional adjustment at this stage can improve the precision of this test. The second step of the process involves a regression model, to further refine the benchmark since some features are not perfectly matched between officers in Table 1, such as the frequency of being in uniform and being on a radio run.

Combining propensity score analysis with a second stage regression model has recently been labeled "doubly robust estimation" since if either the propensity score weights construct a well-matched set of benchmark stops or the regression

model is correctly specified, then the resulting estimate of the officer's effect on the race of those stopped can be consistently estimated.^{xlv}

The z-statistic from these regression models is the commonly used statistical measure for assessing the magnitude of the difference between an officer's minority stop fraction and the officer's internal benchmark group. The z-statistic scales the difference between the officer and his/her internal benchmark such that large differences based on a small number of stops are treated with greater uncertainty than large differences based on a large number of stops. Fridell^{xlvi} suggests 2.0 and Smith^{xlvii} suggests 1.645 as the appropriate z-scores to flag potentially problematic officers. However, such cutoffs generate too many false positives to be useful and are one of the sources of problems for LAPD's system. In a department of 1,000 officers we can expect 50 of them to have z-statistics in excess of 1.645 by chance alone.

Methods based on false discovery rates (fdr) helps address this kind of problem.^{xlviii} The fdr is the probability of no difference between the officer and the benchmark given the value of an observed test statistic, z. We should flag those officers who have values of z that suggest a low probability of being incorrectly flagged as a problem. This approach when applied in Cincinnati noted 4 potentially problematic officers; and in New York City 15 potentially problematic officers.

Internal benchmark approaches provides a method for assessing individual officer bias. Again, the key to this approach is developing a reasonable peer group or comparison set of officers. This approach, however, is limited to departments with officers that make many stops. If officers make few stops (e.g. less than 50) then chance differences from their benchmark are likely and the comparisons are underpowered. Accumulating stops across years can improve this. For departments with few officers (e.g., those with less than 100 officers) the false discovery rate calculations become more unstable and more dependent on statistical assumptions.

^{xlv} For technical details see Kang, J. and J. Schafer. Demystifying double robustness: A comparison of alternative strategies for estimating a population mean from incomplete data, pp. 523–580.

^{xlvi} Fridell. By the numbers: A guide for analyzing race data from vehicle stops.

^{xlvii} Smith, M. R. (2005). Depoliticizing racial profiling: Suggestions for the limited use and management of race in police decision-making, pp. 219–260.

^{xlviii} Benjamini, Y. and Y. Hochberg. Controlling the false discovery rate: A practical and powerful approach to multiple testing.

POST-STOP OUTCOMES

The complexity of benchmarking for assessing bias in the decision to make a stop has in some cases caused analysts to abandon the endeavor in favor of assessing bias in post-stop outcomes, such as duration of the stop, decision to search, and use-of-force. This has its advantages since for this analysis we have a better assessment of the race distribution of who is at risk. However, substantial complexity remains.

Auditing police-citizen interactions

An obstacle to understanding racial disparities in police decision-making is that stopped drivers and pedestrians cannot observe how officers handle other stops, particularly those involving members of another race. They cannot answer the most pertinent question regarding racially bias policing, "would the same outcome have occurred if I had been a different race?" While such counterfactual questions so far have not been answered, recordings of stops can provide some guidance to understanding the dynamics in police-citizen interactions.

Dixon and colleagues^{xlix} used a stratified random sample of 313 vehicle-mounted video and audio recordings from Cincinnati Police Department (CPD) cars to study interactions between police and community members. The study described how the race of the driver and the race of the officer influenced the dynamics of stops, including stop features associated with "counterproductive or dissatisfying interactions," and described how typical police-motorist interactions occur as a function of race.

Among the results reported in this study is the finding that interactions where the officer and driver are of the same race, officers are more likely to be interested in hearing the drivers' comments. The key problem that this creates in Cincinnati is that, since many more CPD officers are white, two-thirds of stops of black drivers involve a white officer while only one-third of stops of white drivers involve a black officer. Thus, the impact of degraded communication due to interracial stops will be greatest for the black drivers.

Additional research by the same research team^l found that white officers conducted more investigative stops (e.g. asking questions about guns or drugs, asking for the IDs of passengers) while black officers were more likely to focus on the traffic infractions alone. Importantly, these differences did not depend on the

^{xlix} Dixon, T. et al. The Influence of race in police-civilian interactions: A content analysis of videotaped interactions taken during Cincinnati police traffic stops, pp. 530-549.

^l Schell, T. et al. Police-community relations in Cincinnati: Year three evaluation report.

race of the driver. That is, white officers also closely investigated white drivers. However, such differences between white and black officers can exacerbate the perception of racially biased policing. The black driver in Cincinnati who experiences one stop with a black officer and another stop with a white officer is likely to attribute the white officer's more intense investigation to race bias, even though on average this white officer treats blacks and whites with a similar level of scrutiny.

The analysis of recorded interactions is useful at identifying problem interactions, factors that can contribute to the perceptions of race, and stops that could be useful in training. However, such methods do not answer the question of whether the police use race as factor in deciding who to stop.

Hit rates

Hit rates, the percentage of conducted searches that turn up contraband, have been a frequently discussed outcomes test for racial equity in searches. If the hit rate for searched nonwhite suspects is less than the hit rate for searched white suspects, police might be applying a lower standard of suspicion to nonwhite suspects when deciding whether to search.

A series of papers by Persico and Todd^{li} provide the theory and empirical examples of the use of hit rates with police traffic stop data. Relying on the premise of a Nash equilibrium, these authors argue that hit rates provide a race-neutral test of bias in police decision making because police decisions about which suspects to search take into account the benefits of searching different suspects, and suspects take "into account the risk of getting searched" (p. 37).^{lii} If officers and criminals act as rational agents then selecting on the decision to stop someone the outcome of stops should be race neutral. Following on the logic of a Nash equilibrium that officers want to maximize their ability to find illegal contraband in traffic stops, and suspects want to reduce their likelihood of being caught, then the probability of successful "hits" should be equal once one conditions on the race of who is stopped. If, for example, police officers want to find illicit drugs and suspects want to avoid detection, the results for searches among police officers who are intentionally biased towards blacks will be offset by

^{li} See Knowles, J., N. Persico, and P. Todd. Racial bias in motor vehicle searches, pp. 203–229; Persico, N., and P. Todd. Generalising the hit rates test for racial bias in law enforcement, with an application to vehicle searches in Wichita, pp. F351–F367; Persico, N., & Todd, P. (2006). Generalising the hit rates test for racial bias in law enforcement, with an application to vehicle searches in Wichita. *The Economic Journal*, 116, F351–F367; Persico, N. and P. Todd. The hit rates test for racial bias in motor-vehicle searches, pp. 37-53

^{lii} Ibid.

a higher yield of searches among whites. In the long-run then the differences between races in hit rates should equalize. Perisco and Todd's analysis of Maryland State Police traffic stop data in several publications reports findings that the fraction of blacks stopped exceeds the fraction of black motorists on the road, but that the hit rates for the two groups is statistically equivalent.

We, however, provide an example to demonstrate that a simple comparison of hit rates can distort the true racial differences. Assume that suspects are stopped for either burglary or robbery. Further assume that there is no racial difference in the rates at which suspects carry contraband and that police are racially neutral in making stop and frisk decisions (essentially blind to race). Last, consider the information shown in Table 2. Within a crime category, hit rates are equal for black and white suspects. In this example, officers detain many more white suspects on suspicion of robbery, a crime with a higher hit rate, than they do black suspects, who are more likely to be stopped for burglary. In this example, though, those large differences in the rates of stops for burglary and robbery by race are due not to officer bias but are the result of racial differences in criminal participation. As a result, the total hit rate for white suspects is 4.6 percent $([1+45]/1,000)$, and, for black suspects, the hit rate is 1.4 percent $([9+5]/1,000)$.

Table 2: Hypothetical Example of a Hit-Rate Analysis

Race	Measure	Burglary	Robbery
White	Stopped and frisked	100	900
	Had contraband (%)	1	5
	Had contraband	1	45
Black	Stopped and frisked	900	100
	Had contraband (%)	1	5
	Had contraband	9	5

One could conclude from these two numbers (4.6% vs. 1.4%) that there is racial bias in the decision to search suspects, and that whites are not searched at sufficient rates. But officers in this hypothetical example are race neutral by design. Hit rates are equal across races for suspected burglars and equal across races for suspected robbers. This is a reminder that failing to account for an important factor—suspected crime, in this example—can distort the conclusions. In practice, the only way for the Nash equilibrium as described by Persico and Todd to work would be if black burglars and white robbers adjusted their criminal behaviors to mirror each other because they had equal probability of being stopped by the police.

This example illustrates a statistical problem that Ayres^{liii} termed the subgroup validity problem, in which a particular relevant feature is more prevalent for certain racial groups. Other factors may impact the hit rate as well. Officers in some precincts may be likelier to frisk, due to crime in the area, recent surges in weapon recoveries, or a series of recent shootings, or more hostile attitudes displayed by suspects. An elevated frisk rate in some precincts may not meet with the community's approval, but it would be premature to attribute this variation to racial bias by police officers without examining other relevant factors. Therefore, it is critical to account for factors correlated with race that might be associated with both suspect race and the rate of contraband recovery.

In Ridgeway's analysis of hit rates in New York City, shown in Table 3, white and Hispanic suspects stopped in situations that were similar to the collection of black suspects had hit rates of 3.2 percent and 3.8 percent, respectively, compared with a hit rate of 3.3 percent for black suspects.^{liv} There was no statistical evidence for a difference between these recovery rates. Furthermore, there were no differences in the rates at which officers found weapons on suspects. The unadjusted hit rates, however, suggested evidence of bias. Again, showing that it is important to adjust for subgroup differences in the circumstances by which different racial groups are subjected to police authority.

Table 3: Frisked or Searched Suspects Found Having Contraband or Weapons

	Black	Hispanic	White
Any contraband	3.3	3.2	3.8
Weapon	0.7	0.7	0.8

It is plausible that the carry rates, the percentage of stopped suspects that have contraband, differ by race. If white suspects simply carry drugs more frequently, perhaps believing that officers are unlikely to search them, then the contraband recovery rates for white suspects will be higher. Persico and Todd theorized from the logic of a Nash equilibrium that criminals will assess their risk of being searched and adjust their frequency of carrying drugs and weapons accordingly, so that an outcome test will be race neutral. It is difficult to confirm this in practice, and, as a result, conclusions drawn from Table 3 must allow for the possibility that carry rates are not uniform across racial groups.

^{liii} Ayres. Outcome tests of racial disparities in police practices. pp. 131–142.

^{liv} Ridgeway, G. Analysis of racial disparities in the New York Police Department's stop, question, and frisk practices.

Analysis of other stop outcomes

Other analysts have focused on developing appropriate benchmarks for studying the stop outcomes themselves. In Cincinnati, for example, Ridgeway^{lv} notes that 47% of stops involving black drivers lasted less than 10 minutes while 56% of stops of nonblack drivers lasted less than 10 minutes. On the surface this seems to be a rather large bias. However, 18% of the stopped black drivers did not have valid drivers licenses while only 5% of nonblack drivers did not have valid licenses. As a result, we cannot discern whether the disparity in stop duration is attributable to the driver's race or to the additional time required to process a stop involving an unlicensed driver.

Social scientists recognize that adjusting for confounding variables is a critical step in all proper analyses, and there are clear examples in the current book where analysts attempt to make such adjustments (see Fagan and Davies; Parker and Stults in current volume). Particular to racial profiling analyses, police may approach vehicles more cautiously and conduct pat searches for weapons in high crime neighborhoods during peak crime times (e.g., late evening on the weekends). These decisions may occur regardless of the driver's race, but may be confounded with race due to differences in the neighborhoods by which minorities and whites live. In high crime neighborhoods police also may be more thorough in checking for vehicle registration and driver's license records, have a longer list of recent suspect descriptions that the stopped driver may match, and may be more likely to develop probable cause. In theory and practices all of these decisions could be independent of the driver's race. As a result, the stop location and time of the stop may influence all of the measured post-stop activities even in the absence of a race bias. When the race distribution of drivers differs by time and neighborhood location, one should adjust for these differences assessing racial bias in post-stop activity. The analysis also might adjust for other features occurring after the stop, such as whether the suspect had an open warrant or a suspended drivers license.

Location and time of the stop are two among a number of factors for which post-stop activity might vary that are confounded with race of drivers or pedestrians stopped by the police. While these differences may be structurally discriminatory based on racial differences in areas that individuals live, they may not be substantively discriminatory based on police-decision making.

The common practice of "adjusting for" potentially confounding factors with multivariate regression is difficult to defend in the analysis of post-stop data. The

^{lv} Schell, T. et al. Police-community relations in Cincinnati: Year three evaluation report.

regression adjustment is only effectively if there is not a strong correlation between race and the other variables in the regression model. If in the case of citizen stops, the distribution of stop features of black differs substantially from the distribution of stop features of whites by neighborhood, type of violation, time of day, etc. it is uncertain whether the estimate of the race effect on police post-stop outcomes sufficiently accounts for these potentially confounding variables. Unless stops of black and white suspects occur in similar circumstances, the regression model will be sensitive to the terms in the model, such as interactions between race and other predictors (e.g., race*location). Unfortunately, this situation is often overlooked in criminological studies of racial profiling.

Earlier we showed an example in which we could reweight the stops of other officers to match the features of stops of a particular officer. In the same manner, Ridgeway (2006) showed that we can construct propensity score weights to reweight the stops of, for example, nonblack drivers or pedestrians to match the characteristics of the stops of black drivers or pedestrians. Table 4, from a Cincinnati Police Department study of racial profiling in traffic stops described in Schell, Ridgeway, and colleagues^{vi}, provides a demonstration. The second column displays the percentages for the black drivers. The third column displays the percentages for the weighted non-black drivers.

Table 4: Comparison on a subset of stop features of the non-black driver sample to black drivers

	% Black drivers N = 20,146	% Non-black drivers (weighted) ESS = 5,365	% Non-black drivers (unweighted) N = 24,383
Neighborhood			
Downtown	2.4	2.4	4.8
Over-the-Rhine	7.1	6.9	3.2
I-71	2.1	2.1	6.1
I-75	6.0	6.1	13.6

^{vi} Ibid.

	% Black drivers N = 20,146	% Non-black drivers (weighted) ESS = 5,365	% Non-black drivers (unweighted) N = 24,383
Time of day			
12-3a.m.	23.3	21.8	16.7
3-6a.m.	5.2	4.8	3.7
6-9a.m.	6.0	8.3	10.8
9a.m.-12p.m.	6.8	7.8	12.7
12-3p.m.	6.9	7.5	12.8
3-6p.m.	16.9	17.8	15.2
6-9p.m.	15.8	14.9	12.7
9p.m.-12a.m.	19.0	17.0	15.4
Reason			
Equipment violation	24.0	22.6	12.7
Moving violation	66.1	69.7	83.4
Resident			
Cincinnati	91.8	90.8	63.2
Ohio (not Cincinnati)	3.8	4.3	18.8
Kentucky	1.9	2.6	11.7
Age			
Under 18	1.7	1.7	1.8
18-25	34.8	32.4	31.2
26-35	28.9	26.3	26.0
36-45	17.5	19.0	18.9
Invalid driver's license	18.0	13.2	5.3
Male	65.9	64.6	65.1

The weighted percentages for the non-black drivers are uniformly close to the percentages for the black drivers. Achieving this balance is the critical step when using propensity score techniques and removes the problems of insufficient overlap between races and non-linearity noted with regression models. Race, therefore, is the only factor differing between the groups by design. The fourth column in Table 4 displays the raw percentages for the non-black driver sample. These data indicate that very few non-black drivers are involved in stops in Over-the-Rhine.

Non-black drivers are much more likely to be stopped on the freeways. Therefore, the weighted sample has been constructed to downweight non-black drivers stopped on the freeways and upweight non-black drivers stopped in Over-the-Rhine. Additionally, non-black drivers with invalid drivers licenses are upweighted so that the rate of invalid drivers licenses in the comparison sample is closer to that of the black driver sample.

Aside from some statistical advantages, the method is also attractive for establishing the face validity of the method. Table 4 is easy to explain to a variety of policy audiences and it is effective for arguing that the subsequent results are based on apples-to-apples comparisons.

The raw numbers indicated that black drivers were much less likely than nonblack drivers to have had a traffic stop last less than 10 minutes, 47% versus 56%. After weighting, the nonwhite drivers stopped at similar times, places, and contexts had stops last less than 10 minutes 47% of the time, the same as the black drivers. All of the difference between the original numbers, 47% and 56%, can be attributable to the factors like time, place, and context.

There are advantages and disadvantages to both hit rates and matching approaches, like the propensity score approach previously discussed. The hit rate approach has intuitive appeal, providing a clear thought experiment where all else should be equal once the police make the decision whom to stop. The hit rates comparison assumes that selecting on who police decide to stop equalizes the two-groups so that whites and blacks should be equivalent. If blacks end up with lower hit rates than whites then one can argue the police are using a lower threshold in assessing suspicion for blacks. But is this reasonable? Actions transpire after the decision to stop that may be confounded with race. There is a body of research in criminology that suggests a variety of reasons for racial differences in stop outcomes. As we previously discussed, Dixon and colleagues found that black-white officer interactions in Cincinnati explained a substantial difference in the length of a stop and the decision to search a vehicle. These decisions, however, don't appear to be racially biased on the suspects but rather reflect racial differences in police officer practices. Engel and Tillyer^{lvii} note the lengthy history of observation studies that find racial differences in suspect demeanor which too can effect outcomes in police-citizen interactions, such that all else but race is not equal once an officer has decided to stop a suspect.

^{lvii} Engel, R.S. and R. Tillyer. Searching for equilibrium: The tenuous nature of the outcome test, pp. 54-71.

By contrast, matching approaches try to make all the statistical adjustments available with observational data. If one has the right set of variables then there is some confidence that a good test of the race-effect in post-stop outcomes can be assessed with accuracy. White and black suspects can be compared to each other in similar situations. If the analyst does not have the right set of contextual variables they can at least get better data and work on improving the matching strategy. There is no magic going on, no necessary thought experiment; one just wants to construct a feasible set of comparison groups.

CONCLUSIONS

The search for an appropriate method for assessing racial bias in police behavior has been a quest. Substantial improvements have been made as investigators have moved away from simple comparisons of police stop decisions to general populations estimates. The search for the appropriate benchmark, however, remains elusive. There is no clear way to establish the correct population at risk for police attention. All approaches have limitations. Clearly, the most feasible benchmarks are ones that attempt to remove as many factors that are potentially confounded with race as possible but are legally permissible on the part of the police. The key to drawing a causal inference about the importance of race is establishing a set of comparison conditions that are race neutral. This is, however, a significant challenge because many factors are highly confounded with race. Census estimates are inappropriate benchmarks. Observations are difficult to collect in a systematic fashion and require observers to note behaviors for which the police should consider someone suspicious. With enough training, effort, and time observation methods can be an effective benchmark in studies that focus on traffic enforcement on highways where minorities and whites are exposed to similar circumstances, but they are less likely to be useful in highly stratified urban environments where the police focus on much more than traffic enforcement. Arrest data is too confounded with police stop decisions to be a useful benchmark. After all, arrests are often a consequence of the decision to stop and search someone. Instrumental variables offer some promise by relying on variations in natures, such as the switch from daylight to darkness, that are independent of race. Here too instrumental variables are limited to drawing a causal inference from the conditions under which they are estimated. If, for example, the police behave systematically different towards minorities only in late night hours variations in natural daylight won't be useful for detecting racial bias. Hit rates are attractive because of the idea that police want to maximize their ability to find contraband and make reasonable arrests, so selecting on who is stopped should provide a race-neutral test. However, racial differences in the characteristics of criminal offenders can make a focus on hit rates invalid. Approaches that compare like

criminals will yield better hit rate assessments. Matching approaches that compare whites to minorities in similar circumstances offer promise because they attempt to make apple-to-apple comparisons. A good matching approach, for example, could provide all relevant police factors net race. Omitted variables will always be a concern. What important variables are missing can, however, be a good subject of discussion. If the police cannot articulate a reasonable set of missing variables that are not recorded and are associated with racial differences in who is searched, the duration of stops, etc. then this provides at least circumstantial evidence of race bias.

Even if police decisions on whom to stop, search, detain are not intentionally biased they may be structurally discriminatory. Patrolling differently in high crime neighborhoods may place a disparate burden on minorities, but may not reflect actual bias in police decision-making, especially when one compares whites and minorities in similarly situated circumstances. Blacks, for example, disproportionately live in neighborhood plagued by crime and violence and there are few large US cities where whites live in comparable circumstances. Even when one does compare whites driving or walking through predominately minority neighborhoods and finds no difference in the probability of being stopped, searched, etc. the reality is that these individuals likely reflect only a small fraction of police actions in minority neighborhoods. So while the decisions by the police may not be intentionally biased, they may serve to affirm perceptions of bias because the level of police activity is greater in high crime-poverty areas disproportionately settled by minorities.

Unfortunately this is no unifying method that can establish the extent to which racially biased policing occurs. All approaches have weaknesses. Social scientists should therefore be measured in their assessments.

BIBLIOGRAPHY

Alpert, G. P., Smith, M. R., and Dunham, R. G. (2003), "Toward a Better Benchmark: Assessing the Utility of Not-at-Fault Traffic Crash Data in Racial Profiling Research," in *Confronting Racial Profiling in the 21st Century: Implications for Racial Justice*, Boston.

Alpert, Geoffrey, John M. MacDonald, and Roger Dunham. 2005. "Police Suspicion and Discretionary Decision Making During Citizen Stops." *Criminology* 43: 407-434.

Alpert, G. P., Smith, M. R., and Dunham, R. G. (2007), "Investigating Racial Profiling by the Miami-Dade Police Department: A Multimethod Approach," *Criminology and Public Policy* 6: 25-56.

Angrist, Joshua D., Guido W. Imbens, and Donald B. Rubin (1996). "Identification of Causal Effects Using Instrumental Variables," *Journal of the American Statistical Association* 91(434):444-455.

Ayres, Ian (2002). "Outcome Tests of Racial Disparities in Police Practices," *Justice Research and Policy*, 4, pp. 131–142.

Benjamini, Y. and Y. Hochberg (1995). Controlling the false discovery rate: A practical and powerful approach to multiple testing. *Journal of the Royal Statistical Society, Series B* 57, 289–300.

Birotte, A. (2007, November). Training evaluation and management system (TEAMS) II audit, phase I (fiscal year 2007/2008). Technical report, Office of the Inspector General, Los Angeles Police Department, Los Angeles, CA.
http://www.lacity.org/oig/Reports/TEAMS2F1Report_11-06-07.pdf.

Christopher, Warren. (1991). Report of the Independent Commission on the Los Angeles Police Department.

Decker, S., and Rojek, J. (2002). *Saint Louis metropolitan police department traffic stop patterns*. Report submitted to the St. Louis Police Department, January.

Dixon, Travis L., Terry L. Schell, Howard Giles, and Kristin L. Drogos (2008). "The Influence of Race in Police–Civilian Interactions: A Content Analysis of Videotaped Interactions Taken During Cincinnati Police Traffic Stops," *Journal of Communication* 58:530-549.

Eck, John E., Lin Liu, and Lisa Growette Bostaph, *Police Vehicle Stops in Cincinnati: July 1–December 31, 2001, 2003*. Online at http://www.cincinnati-oh.gov/police/downloads/police_pdf6937.pdf as of November 6, 2005.

Efron, B. (2004). Large-scale simultaneous hypothesis testing: the choice of a null hypothesis. *Journal of the American Statistical Association* 99, 96–104.

Efron, B. (2007). Correlation and large-scale simultaneous significance testing. *Journal of the American Statistical Association* 102 (477), 93–103.

Engel, Robin S. and Tillyer, Rob (2008) 'Searching for Equilibrium: The Tenuous Nature of the Outcome Test', *Justice Quarterly*, 25:1, 54–71.

Farrell, Amy, Dean Jack McDevitt, Shea Cronin, and Erica Pierce (2003). Rhode Island Traffic Stop Statistics Act: Final Report. Available at http://www.racialprofilinganalysis.neu.edu/IRJ_docs/RIFinalReport.pdf

Fridell, Lorie A., *By the Numbers: A Guide for Analyzing Race Data from Vehicle Stops*, Washington, D.C.: Police Executive Research Forum, 2004. As of November 9, 2007: http://www.policeforum.org/upload/BytheNumbers%5B1%5D_715866088_12302005121341.pdf

Gelman, A., J. Fagan, and A. Kiss (2007). An analysis of the New York City Police Department's "stop-and-frisk" policy in the context of claims of racial bias. *Journal of the American Statistical Association* 102, 813–823.

Greenwald, H. P. (2001), "Final Report: Police Vehicle Stops in Sacramento, California," Sacramento Police Department.

Grogger, J., & Ridgeway, G. (2006). Testing for racial profiling in traffic stops from behind a veil of darkness. *Journal of the American Statistical Association*, 101, 878-887.

Imbens, G. (2003). "Nonparametric Estimation of Average Treatment Effects Under Exogeneity: a Review," Technical Working Paper 294, National Bureau of Economic Research.

Hindelang, Michael. "Variations in Sex-Age-Race Incidence Rates of Offending." *American Sociological Review* 46: 461-475.

Jefferis, Eric S., Robert J. Kaminski, Stephen Holmes, and Dena E. Hanley, "The Effect of a Videotaped Arrest on Public Perceptions of Police Use of Force," *Journal of Criminal Justice*, Vol. 25, No. 5, 1997, pp. 381–395.

Kang, J. and J. Schafer (2007). Demystifying double robustness: A comparison of alternative strategies for estimating a population mean from incomplete data. *Statistical Science* 22 (4), 523–580.

Klinger, David A., "Demeanor or Crime? Why 'Hostile' Citizens Are More Likely to Be Arrested," *Criminology*, Vol. 32, No. 3, 1994, pp. 475–494.

— — —, "Negotiating Order in Patrol Work: An Ecological Theory of Police Response to Deviance," *Criminology*, Vol. 35, No. 2, 1997, pp. 277–306.

Klinger, David A. and George Bridges. 1997. "Measurement Error in Calls-For-Service as an Indicator of Crime." *Criminology*, 35(4): 705-726.

Knowles, J., N. Persico, and P. Todd (2001). Racial bias in motor vehicle searches: Theory and evidence. *Journal of Political Economy* 109, 203-229.

Lamberth, J. (1994), "Revised Statistical Analysis of the Incidence of Police Stops and Arrests of Black Drivers/Travelers on the New Jersey Turnpike Between Exits or Interchanges 1 and 3 From the Years 1988 Through 1991," report, Temple University, Dept. of Psychology.

Lamberth, John (2003). "Racial Profiling Data Analysis Study: Final Report for the San Antonio Police Department," available at http://www.sanantonio.gov/sapd/pdf/LamberthSanAntonioRpt_2003.pdf.

Lange, J. E., Blackman, K. O., and Johnson, M. B. (2001). Speed violation survey of the New Jersey turnpike: Final report. Office of the Attorney General of New Jersey.

Maxfield, Michael and George L. Kelling (2005). New Jersey State Police and Stop Data: What Do We Know, What Should We Know, and What Should We Do? The Police Institute at Rutgers-Newark, School of Criminal Justice, Rutgers University.

McConnell, E. H., and Scheidegger, A. R. (2001), "Race and Speeding Citations: Comparing Speeding Citations Issued by Air Traffic Officers With Those Issued by Ground Traffic Officers," paper presented at the annual meeting of the Academy of Criminal Justice Sciences, Washington, DC, April 4–8.

Montgomery County Department of Police (2002), "Traffic Stop Data Collection Analysis," 3rd report.

Neyman, Jerzy (1923). On the application of probability theory to agricultural experiments: Essay on principles, Section 9," translated in *Statistical Science* 5, 465-480, 1990.

Persico, N., & Todd, P. (2006). Generalising the hit rates test for racial bias in law enforcement, with an application to vehicle searches in Wichita. *The Economic Journal*, 116, F351–F367.

Persico, Nicola and Todd, Petra E. (2008) "The Hit Rates Test for Racial Bias in Motor-Vehicle Searches", *Justice Quarterly*, 25:1, 37 — 53.

Reiss, Albert J. (1971). Systematic observation of natural social phenomena. *Sociological Methodology*, 3: 3-33.

Ridgeway, G. (2006). Assessing the effect of race bias in post-traffic stop outcomes using propensity scores. *Journal of Quantitative Criminology* 22 (1), 1–26.

Ridgeway, G., T. L. Schell, K. J. Riley, S. Turner, and T. L. Dixon (2006). Police-community relations in Cincinnati: Year two evaluation report. Technical Report TR-445-CC, RAND Corporation, Santa Monica, CA. http://www.rand.org/pubs/technical_reports/TR445/.

Ridgeway, G. (2007). Analysis of racial disparities in the New York Police Department's stop, question, and frisk practices. Technical Report TR-534-NYCPF, RAND Corporation.

Ridgeway, G. and J. M. MacDonald (2008). Doubly robust internal benchmarking and false discovery rates for detecting racial bias in police stops. Working paper.

Sampson, Robert J., and William Julius Wilson, "Toward a Theory of Race, Crime, and Urban Inequality," in John Hagan and Ruth D. Peterson, eds., *Crime and Inequality*, Stanford, Calif.: Stanford University Press, 1995, pp. 37–54.

Schell, Terry L., Greg Ridgeway, Travis L. Dixon, Susan Turner, K. Jack Riley (2007). Police-Community Relations in Cincinnati: Year Three Evaluation Report. RAND TR-535-CC. http://www.rand.org/pubs/technical_reports/TR535/

Skogan, Wesley G., *Disorder and Decline: Crime and the Spiral of Decay in American Neighborhoods*, Berkeley, Calif.: University of California Press, 1990.

Smith, Douglas A., "The Neighborhood Context of Police Behavior," in Albert J. Reiss and Michael H. Tonry, eds., *Communities and Crime*, Chicago: University of Chicago Press, 1986, pp. 313–341.

Smith, M. R. (2005). Depoliticizing racial profiling: Suggestions for the limited use and management of race in police decision-making. *George Mason University Civil Rights Law Journal* 15 (2), 219–260.

Walker, S. (2001). Searching for the denominator: Problems with police traffic stop data and an early warning system solution. *Justice Research and Policy* 3 (2), 63–95.

Walker, S. (2002). The citizen's guide to interpreting traffic stop data: Un-raveling the racial profiling controversy. Unpublished manuscript.

Walker, S. (2003a). Early intervention systems for law enforcement agencies: A planning and management guide. Technical report, Office of Community Oriented Policing Services, U.S. Department of Justice, Washington DC.
http://www.cops.usdoj.gov/html/cd_rom/inaction1/pubs/EarlyInterventionSystemsLawEnforcement.pdf.

Walker, S. (2003b). Internal benchmarking for traffic stop data: An early intervention system approach. Technical report, Police Executive Research Forum.

Weitzer, Ronald, "Incidents of Police Misconduct and Public Opinion," *Journal of Criminal Justice*, Vol. 30, No. 5, 2002, pp. 397–408.

Zingraff, M. T., Mason, M., Smith, W., Tomaskovic-Devey, D., Warrent, P., McMurray, H. L., and Fenlon, R. C. (2000), "Evaluating North Carolina State Highway Patrol Data: Citation, Warnings, and Searches in 1998," report submitted to North Carolina Department of Crime Control and Public Safety and North Carolina State Highway Patrol.

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VIA EMAIL

May 2, 2018

Re: *Brown, et al. v. Madison County, Mississippi, et al.*, No. 3:17-cv-347 WHB LRA

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Dear Mr. Nobile:

I write in response to your letter dated April 25, 2018. While Plaintiffs do not concede that the requests for materials (the “requests”) set forth in your letter are proper or within the requirements set forth in either the Federal Rules of Evidence or the Federal Rules of Civil Procedure, enclosed please find a chart which lists the filenames for the incident reports included in Exhibit 9 to Dr. Rahul Guha’s Summary Declaration, dated March 13, 2018, titled “Arrests From Incident Reports Related to Traffic Stops Initiated For A Seatbelt Violation Only.”

Your letter also requests that Plaintiffs “provide Defendants with the number of incident reports that Cornerstone’s OCR software was unable to read, as disclosed in fn. 28 to [Dr. Guha’s] [D]eclaration.” Footnote 28 of Dr. Guha’s Declaration indicates “there may be files that are not identified by [the keyword search methodology described in paragraphs 29 and 30 of the Declaration], but would have been identified as relevant by a manual review.” The quality of the conversion from image to text by OCR software varies across and within incident reports. Some text is accurately converted by OCR software, while other text within the same incident report may be converted with some errors.¹ Incident reports with errors in the keyword search terms will not be captured by a keyword search of the converted files, even though other text of that incident report may have been accurately converted by OCR software. An accurately converted incident report that does not contain any of the searched keywords, however, also will (appropriately) not be captured by the search methodology described in Dr. Guha’s Declaration. Thus, only a manual review of all incident reports would identify the precise number of incident reports that were responsive to the keyword search terms but were not accurately converted by the text recognition software.

¹ For example, the character “S” may be read as “5” or the character “A” may be read as “4”.

May 2, 2018

T. Russell Nobile, Esq.

Plaintiffs reserve all rights and objections, both procedural and substantive, with respect to Defendants' requests.

Very truly yours,

/s/ Kavitha Sivashanker

Kavitha Sivashanker

Enclosure

cc: Michael B. Wallace, Esq.; James E. Graves, Esq.; Charles E. Cowan, Esq.; Rebecca B. Cowan, Esq.; Katie Bryant Snell, Esq.; Lawson Hester, Esq.

Incident Reports Included in Guha Declaration Exhibit 9

Incident Report Filename
MC-RFP-Inc. Rep. 000163.pdf
MC-RFP-Inc. Rep. 002755.pdf
MC-RFP-Inc. Rep. 002932.pdf
MC-RFP-Inc. Rep. 003014.pdf
MC-RFP-Inc. Rep. 003346.pdf
MC-RFP-Inc. Rep. 003838.pdf
MC-RFP-Inc. Rep. 004083.pdf
MC-RFP-Inc. Rep. 004206.pdf
MC-RFP-Inc. Rep. 004347.pdf
MC-RFP-Inc. Rep. 004759.pdf
MC-RFP-Inc. Rep. 004763.pdf
MC-RFP-Inc. Rep. 004806.pdf
MC-RFP-Inc. Rep. 004830.pdf
MC-RFP-Inc. Rep. 005371.pdf
MC-RFP-Inc. Rep. 005415.pdf
MC-RFP-Inc. Rep. 005726.pdf
MC-RFP-Inc. Rep. 005803.pdf
MC-RFP-Inc. Rep. 006389.pdf
MC-RFP-Inc. Rep. 006842.pdf
MC-RFP-Inc. Rep. 007155.pdf
MC-RFP-Inc. Rep. 007492.pdf
MC-RFP-Inc. Rep. 015857.pdf
MC-RFP-Inc. Rep. 016105.pdf
MC-RFP-Inc. Rep. 016166.pdf
MC-RFP-Inc. Rep. 016220.pdf
MC-RFP-Inc. Rep. 016239.pdf
MC-RFP-Inc. Rep. 016301.pdf
MC-RFP-Inc. Rep. 016471.pdf
MC-RFP-Inc. Rep. 016790.pdf
MC-RFP-Inc. Rep. 016975.pdf
MC-RFP-Inc. Rep. 017502.pdf
MC-RFP-Inc. Rep. 017768.pdf
MC-RFP-Inc. Rep. 017900.pdf
MC-RFP-Inc. Rep. 018421.pdf
MC-RFP-Inc. Rep. 019500.pdf
MC-RFP-Inc. Rep. 019830.pdf
MC-RFP-Inc. Rep. 020513.pdf
MC-RFP-Inc. Rep. 020518.pdf
MC-RFP-Inc. Rep. 020762.pdf
MC-RFP-Inc. Rep. 020794.pdf
MC-RFP-Inc. Rep. 021036.pdf
MC-RFP-Inc. Rep. 021064.pdf
MC-RFP-Inc. Rep. 021867.pdf
MC-RFP-Inc. Rep. 022284.pdf

Incident Reports Included in Guha Declaration Exhibit 9

Incident Report Filename
MC-RFP-Inc. Rep. 022639.pdf
MC-RFP-Inc. Rep. 022684.pdf
MC-RFP-Inc. Rep. 025950.pdf
MC-RFP-Inc. Rep. 026741.pdf
MC-RFP-Inc. Rep. 027316.pdf
MC-RFP-Inc. Rep. 027520.pdf
MC-RFP-Inc. Rep. 027573.pdf
MC-RFP-Inc. Rep. 028041.pdf
MC-RFP-Inc. Rep. 028357.pdf
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MC-RFP-Inc. Rep. 029143.pdf
MC-RFP-Inc. Rep. 030561.pdf
MC-RFP-Inc. Rep. 031458.pdf
MC-RFP-Inc. Rep. 033291.pdf
MC-RFP-Inc. Rep. 033975.pdf
MC-RFP-Inc. Rep. 034025.pdf
MC-RFP-Inc. Rep. 034182.pdf
MC-RFP-Inc. Rep. 035550.pdf
MC-RFP-Inc. Rep. 035829.pdf
MC-RFP-Inc. Rep. 036278.pdf
MC-RFP-Inc. Rep. 036283.pdf
MC-RFP-Inc. Rep. 036405.pdf
MC-RFP-Inc. Rep. 036455.pdf
MC-RFP-Inc. Rep. 036732.pdf
MC-RFP-Inc. Rep. 037181.pdf
MC-RFP-Inc. Rep. 038664.pdf
MC-RFP-Inc. Rep. 039095.pdf
MC-RFP-Inc. Rep. 040559.pdf
MC-RFP-Inc. Rep. 042302.pdf
MC-RFP-Inc. Rep. 044449.pdf
MC-RFP-Inc. Rep. 044452.pdf
MC-RFP-Inc. Rep. 046465.pdf
MC-RFP-Inc. Rep. 047036.pdf
MC-RFP-Inc. Rep. 047457.pdf
MC-RFP-Inc. Rep. 048324.pdf
MC-RFP-Inc. Rep. 048766.pdf
MC-RFP-Inc. Rep. 048843.pdf
MC-RFP-Inc. Rep. 049468.pdf
MC-RFP-Inc. Rep. 049944.pdf
MC-RFP-Inc. Rep. 051663.pdf
MC-RFP-Inc. Rep. 051761.pdf
MC-RFP-Inc. Rep. 053630.pdf
MC-RFP-Inc. Rep. 055124.pdf
MC-RFP-Inc. Rep. 055778.pdf

Incident Reports Included in Guha Declaration Exhibit 9

Incident Report Filename
MC-RFP-Inc. Rep. 055817.pdf
MC-RFP-Inc. Rep. 055904.pdf
MC-RFP-Inc. Rep. 056411.pdf
MC-RFP-Inc. Rep. 056508.pdf
MC-RFP-Inc. Rep. 056680.pdf
MC-RFP-Inc. Rep. 058699.pdf
MC-RFP-Inc. Rep. 058875.pdf

Source: MC-RFP-Inc. Rep. 000001 – MC-RFP-Inc. Rep. 059053.

Note:

[1] Guha Declaration Exhibit 9 tabulates 102 arrests from incident reports related to traffic stops initiated for a seatbelt violation only. The 102 arrests come from 95 unique incident reports.